



Web-Based Communication for the REACH Program: Design and Implementation

An Interactive Qualifying Project Report
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WORCESTER POLYTECHNIC INSTITUTE
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Degree of Bachelor of Science

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ABSTRACT

For this project, we designed and implemented a set of web-based communication solutions for the REACH Program, a non-profit organization based in Boston, Massachusetts. Program staff works with the families of children, aged birth through age three, to support early childhood development. Previously, the REACH program used a website to communicate with enrolled families, but the website was not easy to use or maintain for the staff members. We created a new website based on the Acquia Drupal content management system, and created pages on the social networking sites Facebook and Twitter. We provided the program a list of recommendations for website and social networking implementation and maintenance, and suggestions for future work, including database management and content development.

ACKNOWLEDGEMENTS

This project would not have been possible without the support of several key individuals over the last seven months. First, we would like to thank the staff of the REACH

Program:

- Charles Anderson, MD
- Nicole Croak, OTR/L, CEIS, CIMI
- Jacqueline Stockton, MS, PT, CIMI
- Lisa Samios, MS, CCC-SLP, CEIS
- Lori Parent, M.Ed, CEIS, CIMI
- Pattie Aiello, RN, IBCLC

We would like to thank the REACH Program staff for their enthusiasm for this project, their constructive feedback during the website development, and their help in gathering the information needed to redesign the program website. In particular, Jacqui Stockton served as our key contact person for the REACH Program and provided invaluable feedback and guidance on behalf of the staff through the course of the project.

A special note must also be made for our WPI project advisor, Bengisu Tulu, who took two students with no technical knowledge under her wing and showed them the ropes of systems design and analysis. Her support, particularly during the website development stages, is much appreciated.

SPONSOR SUPPORT LETTER



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Caritas Christi

Re: REACH Program Website IQP

IQP Team: Ashleigh Wood and Ryan Brown

Dear Professor Tulu,

I would like to take the opportunity to express great appreciation and gratitude to both Ashleigh and Ryan for all of their hard work and dedication to our website project. They were extremely professional throughout the entire process and the REACH team is very pleased with our new website. They have provided our program with many opportunities for growth and development.

Ashleigh and Ryan were both very knowledgeable, personable and in constant communication with the team for the duration of the project. We were constantly receiving updates and opportunities for revisions and input to the project. They were able to answer all of our questions and requests in a very timely manner. They were flexible with our tight schedule and came to our location several times to review progress.

In the few days that our new website and social networking sight have been up and running, we have already begun to use these resources to our benefit. Many families have already expressed their excitement of these changes and are now using our method of social networking to keep in touch with other families and the team.

In conclusion, the REACH team would like to express how much of a pleasure it was to work with Ashleigh and Ryan for this project. We are all very pleased with the end product and would recommend them both for future projects of this nature.

Sincerely,

REACH Team

Jacqueline Stockton MS PT
Nicole Croak OTR/L
Lisa Samios MS, CCC-SLP
Lori Parent M Ed.
Dr. Charles Anderson MD.

resources ✦ education ✦ advocacy ✦ connections ✦ hope

AUTHORSHIP

The authorship of this project was divided to best address the complexities of the project. Contributions to all phases of the project, including this report, all presentations, and website and social networking development, are detailed herein.

Ryan Brown

Ryan led the social networking component of this project. He conducted all primary research, prototyping, and implementation for the Facebook and Twitter pages, and authored the corresponding sections on these topics. He was responsible for creating the first prototype (mock-up) of the website, and was responsible for gathering the information and graphics needed for the website. He shared presentation responsibilities with Ashleigh, providing preparation and organization of hard-copy materials, drafting sections of our presentations and assisting with editing, and presenting project information as it related to our social networking efforts. With Ashleigh, Ryan shared communication responsibilities with the project sponsors, and provided valuable feedback on all versions of the website and drafts of this report.

Ashleigh Wood

Ashleigh served as the primary writer and editor for this report, and as the primary website developer for the project. She was responsible for the background research and authorship of all sections of this report (excluding those on social networking), and provided edits, formatting, and guidance on the direction of all other writing. She developed the new program website through development phases II and III with the

feedback of our project sponsors, drafted a majority of the material necessary for all sponsor presentations, and presented the bulk of the project material. Along with Ryan, Ashleigh shared communication responsibilities with the project sponsors, and provided feedback on the development and implementation of the Facebook and Twitter pages.

EXECUTIVE SUMMARY

Problem Statement

Non-profit organizations frequently encounter difficulties in web-based communications, often due to limited technological resources and budgetary restraints. The Internet offers a unique opportunity for non-profit organizations to reach varied publics without enormous financial burdens associated with other public relations media (Kang & Norton, 2004). The REACH Program is a non-profit outreach program based at Caritas St. Elizabeth's Medical Center in Boston, Massachusetts. Staff members work with the families of children, birth through age three, providing various developmental services such as screenings and playgroups. These services are free of charge and have no eligibility requirements, and as a result the program has seen a marked increase in the numbers of inquiries and enrolled families. This increase in exposure resulted in a backlog of phone calls, voicemails, and emails that the staff had to manage with limited resources. The program was utilizing a website originally intended to assist in providing information to interested families. The design of the original website did not allow staff members to easily update and manage, however, and the content was outdated. As a result, the website was not extensively used by staff members, enrolled families, or other members of the program's target audience.

Project Objectives

The goal of our project was to provide a set of solutions for the REACH Program that would enable better web-based communication. The solutions had to be easy to use for

the staff, easily accessible for both staff members and families, and not require technical knowledge. These solutions had to be effective and efficient in conveying important information, such as scheduling changes, to families. We created a new, user-friendly website based on the Acquia Drupal content management system (CMS) platform, and utilized Facebook and Twitter to create an effective web-based communication solution for the program.

Methodology

The REACH Program operated with a website that was unable to effectively disseminate information to its varied audiences. Our goal was to develop new, accessible, Internet-based initiatives to satisfy the needs of the organization. To accomplish this goal, we used a systems analysis and design methodology that followed four key stages: planning, analysis, design, and implementation.

After determining the project's requirements, we began investigating various options for web communication, including website design tools and social networking options. We developed mock-ups of the social networking and website pages, and created a series of prototypes based on the Acquia Drupal content management system platform, Facebook, and Twitter.

We began by meeting with the REACH staff to determine what information they desired to communicate with families, and what the limitations of their current communication strategies were. We then analyzed the literature to develop a framework for website

evaluation, and compared the REACH Program website to the websites of comparable programs in the Greater Boston area. We developed a framework for website analysis in order to compare the REACH Program website to websites of similar programs in the area, and began gathering requirements from the REACH staff. Interviews and conference calls with the staff allowed us to determine their requirements for new web-based communication initiatives, as well as the feasibility of the project.

After determining the project's requirements, we began investigating various options for web communication, including website design tools and social networking options. After performing a cost-benefit analysis of our findings, we developed mock-ups of the social networking and website pages, and created a series of prototypes based on the Acquia Drupal content management system platform, Facebook, and Twitter. These prototypes were presented to the program staff for critique and for guidance on the remainder of the project.

The second phase of this project was the creation of website and social networking prototypes, which were then presented to the REACH staff for evaluation and analysis. After gathering further information (i.e. handouts, program descriptions, graphics, staff information), a second and final prototype for the new REACH program website was created; Facebook and Twitter pages were also created and implemented.

Results

Through background research and analysis of the REACH Program's communication strategies, we determined the following requirements for the new program website:

1. The website needed to be easily managed, as the REACH Program staff had limited technological resources that are typically necessary to edit a complex website.
2. The website lacked information commonly requested by enrolled families (i.e. informational handouts, playgroup descriptions, program handbook).
3. The website should allow staff to make timely changes to communicate time-sensitive information, such as cancellations, etc.

To satisfy these requirements, we developed a final prototype for a new website for the REACH Program, along with the development of social networking pages. The website was built on the Drupal content management system (CMS) platform to allow ease of maintenance for staff members without technical knowledge, and contained a broad range of resources commonly requested by enrolled families. We also developed and implemented a Facebook fan page and Twitter account to reach a larger, more diverse audience, and to enable the program staff to communicate cancellations and other information quickly and effectively. The Facebook and Twitter accounts were “linked” to enable shared informational updates; if status information is changed on one account, it is automatically transmitted and displayed on the other account.

Recommendations

While we were able to address many of our objectives, we were unable to implement the new website developed for the REACH Program due to hosting difficulties that arose as the project term was coming to a close. We suggest that the program staff purchase hosting services compatible with the Acquia Drupal platform, install the newly developed

website, and conduct usability testing with enrolled families to adjust the website's content. Further, we recommend the REACH staff continue using the Facebook fan page and Twitter account that have been established; this use should include continued editing of content and use of status updates (i.e. playgroup time changes), as well as extending fan page invitations to families already enrolled in the program.

Additionally, we suggest additional future project teams continue to develop the website and social networking initiatives to fully utilize the benefits they each offer. Specifically, we recommend these projects address data management and marketing strategies, as these elements are important to web-based communication but were beyond the scope of our project.

LEARNING STATEMENTS

An integral part of any group project is for team members to learn both the concepts associated with the project and the interpersonal skills that go hand-in-hand with a productive group dynamic. In this section, we individually detail what we each learned during this project, and how we will apply it to our future endeavors.

Ryan Brown

The assignment was to improve the website of the REACH program. Throughout this project, I learned about what the REACH program is as well as information about different websites and their designs.

REACH is a non-profit outreach program at Caritas St. Elizabeth's Hospital in Boston, MA. The program assists families that have children from birth up to the age of three. The program's services are related to assisting with the development of children and family support. Communicating with the public about these services is extremely important. The internet is the most widely used source to search for information, contacts, and organizations which makes it an essential communication tool.

In order to improve the program's current website, I had to learn what makes a successful website and to do research to compare different websites. Having a functional website that is easy to navigate as well as providing adequate information is a necessity.

Researching the websites of related non-profit organizations was an important step in the process. Website elements and characteristics play an important role in the framework.

All of these characteristics affect the quality of the website. Having too much information that is not designed with the proper layout and background color makes it difficult for the user to locate items. The more time it takes for the user to find information will cause frustration and the user will most likely leave the site. Attracting users to your site is required. However, having those users continuing to access the website is the most important aspect of having a website.

I learned that advertising and social networking through the Internet are great methods to increase awareness and interest in your program. One way to improve the website is to have direct links to other social networking websites. After researching the different social networking sites, (MySpace, LinkedIn, Facebook, and Twitter), linking Facebook and Twitter was found would be the best option.

I also learned concepts related to the social side. For me, this was most important. I have always been on athletic teams and have worked with my peers on school projects. However, this assignment was unlike any of my previous experiences. This project required much more time and intense work than anything I have ever had in the past. I have spent more hours with this project than I have with regular daily homework assignments.

I also learned that this project requires a lot of teamwork in which one person works on his or her specific task while the other person works on his or her task. Toward the conclusions of the project, both team members have worked together to combine their efforts into one final product. A project such as this requires a large amount of searching

information, reading, writing, and detailed analysis for the paper. This also requires both partners to understand how each partner thinks about one another's efforts as well as expressing their opinions and discussing the topic. A partner may disagree or agree. However, it is a commitment where they work together and communicate with each other so that they develop an effective plan.

This is a great experience for me because I can learn a lot from this IQP. As a consequence, I will be in a good position to do a better job when I will have to complete MQP. I say this so that I will be prepared for what is next, how I can do it better, and be aware of the quickest and most intelligent way to search and discuss the information for which I am searching. In addition, gaining a greater understanding of what my partners and professor expect of me and of what the project requires of me has resulted from doing this project.

Ashleigh Wood

The experience I had completing this project was unlike any other I have had as an undergraduate student at WPI. WPI projects are intended to be time- and labor-intensive, and aim to develop a student's classroom knowledge into real world know-how. Completing this project to fulfill my Interactive Qualifying Project (IQP) requirement did just that. Seven months of working directly with a project sponsor and a partner whose academic experiences were in a differing discipline developed my communication and collaborative working skills, presented daily challenges, and introduced me to the complexities of a long-term project.

As a Biology and Biotechnology major, my project experiences are usually bench-based. Life science research typically involves gathering quantitative data from physical experiments, and developing conclusions based on the data provided by those experiments. This project introduced me to systems design and analysis, as well as website design. Evaluating the efficiency of our website proved to be a difficult concept for me to grasp, as it was far more qualitative in nature than the data analysis I am accustomed to. In the life sciences, data usually speaks for itself and leaves little room for argument. This project also exposed me to the differences in opinion and scheduling that often arise in group projects, enabling me to develop better negotiation skills and careful time management. The assessment framework for website efficiency we developed as part of this project was largely qualitative, which frequently resulted in long discussions of personal opinions and mandated eventual compromise between us.

I am certain that the experience I gained through this project will be of use to me in my future endeavors. After graduation, I will be employed in pharmaceutical process development, which requires long-term teamwork and systems analysis much like the dynamics of this project. I have already made use of my experiences with this project during interview discussions, as pharmaceutical operations are largely industrial, and under constant analysis to determine more efficient procedures.

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1. INTRODUCTION

Advancements in communication technologies and increased use of the web have created an environment in which non-profit groups are capable of reaching far greater audiences than they have been capable of in the past. Non-profit organizations (NPOs) typically operate under the constraint of limited public relations budgets; the Web provides a low-cost, highly visible media outlet for NPOs to communicate their messages and build public support for their work (Kang and Norton, 2004).

Health care providers have long endeavored to bridge gaps in communication with patients and other concerned parties. Development of the Web has served to further compound this dilemma; as individuals become more empowered to seek out health care information on their own, the issue of health literacy becomes more important.

Health literacy, the ability of individuals to obtain and understand basic health care information needed to make health care decisions on their own (Ratzan, 2001), is a key element to be kept in mind while designing effective websites for any health care platform.

Problem Statement

The REACH Program is a non-profit outreach program based at Caritas St. Elizabeth's Medical Center in Boston, MA. Program staff members work closely with the families of children from birth through age three to provide services, such as developmental screenings and playgroups, to allow each child an opportunity to reach his/her maximum development. The program currently relies on staff members to field numerous phone calls and to distributed hardcopy materials in order to maintain contact with an increasing

number of families. A website was designed for the program several years ago to assist in providing information to families, but it is currently not extensively used by staff members, enrolled families, or other members of the program's target audience.

Creating a user-friendly website programmed to retrieve and disseminate information for families is just the beginning of aiding the REACH Program staff in their efforts of communication. A system that is capable of providing registration forms and other information to families through the website is expected to decrease the demands currently placed on staff members responsible for fielding frequent phone calls from interested families. Staff will have more time available to focus their efforts on providing services directly to families.

Project Objectives

Our goal was to develop new web-based communication methods for the REACH Program that satisfied the needs of the organization, and aided in disseminating information to the program's varied audiences. In order to accomplish this goal, we addressed each of the following objectives, which were developed along with a systems analysis and design methodology:

- 1. Identify the information that the REACH Program desire to disseminate to potential enrolled families and currently enrolled families, as well as their current communication strategies.*
- 2. Analyze the design and content of the current REACH Program website and other relevant organizations using research methods described in the literature.*

3. *Identify various options for web site design and maintenance for the REACH Program's new website; identify several options of social networking for the program.*
4. *Design and implement a new website and social networking page for the REACH Program.*

Report Layout

This report will guide the reader through five primary chapters, and details the research, development, and implementation of this project. We begin by examining the literature to determine the importance of carefully developed web sites and to examine the methods used to analyze the usability of various web sites. In this chapter, we also analyze the REACH Program's current web site and several other web sites developed by similar organizations in the Greater Boston area. We then move into a methodology chapter in which we examine the various technologies considered for use in this project, and identify the criteria that we used for our analysis and development. This chapter also details our specific analysis and design methods, the resources needed for us to complete the project, and our plans for the content and design of the completed web site and social networking pages (Facebook and Twitter). A fourth chapter provides a detailed discussion of the development, implementation, and evaluation of the new REACH Program web initiatives. The report's final chapter presents our project conclusions and suggestions for future work.

2. BACKGROUND AND LITERATURE REVIEW

This chapter introduces several key components of effective web site design, and their importance in establishing effective communication with organizations' target audiences.

The key objectives of non-profit organizations are frequently to increase the organization's visibility, to promote services offered, and to raise awareness and funds for the organization's work (Ingenhoff & Koelling, 2009). Internet usage across all social and economic demographics provides an inexpensive means to promote the organization across a large potential audience. In order to efficiently communicate that message, careful audience analysis and planning of site design must first take place.

2.1 The Importance of Effective Web-Based Communication

The increased availability of health care information on the Internet in recent years has resulted in a shift in consumer preference. Recent studies have revealed that as more individuals become comfortable with using the World Wide Web, they are more likely to consult web pages than to schedule an appointment with their physician to discuss perceived health problems (Bernstam et al., 2005).

This shift in preference demands that web pages providing any form of health care information be as up-to-date and correct as possible. Further, and perhaps more importantly, site content must be carefully designed to both educate readers and to develop social capital with wide audiences (Ratzan, 2001). However, effective communication is often hindered by several factors (Kandula et al., 2009):

1. The introduction of too much information in one media format.

2. The presentation of ideas in overly complex language.
3. The use of language that is for individuals with higher literacy.

Similar studies have offered comparable conclusions. All too frequently, valuable information is overlooked due to a loss of interest by readers overwhelmed by text (Berland et al., 2001). Effective consumer-oriented health care websites must be carefully designed to both appeal to and educate varied audiences with a wide variety of backgrounds and interests.

A review conducted by Hallahan (2001) suggested that content and design simplicity are the two most paramount considerations in web design. Content is analogous to the utility of the site by the user; if not carefully tailored to serve the needs of the target audience, the content's message is ineffective. The REACH Program aims to target families of newly born infants; thus, the content of the program website needed to be designed to fulfill this audience's need for information. Further, the site needed to be designed with ease of use, accessibility, and the complexities presented by the web page format in mind. Readers have been found to exercise specific reading patterns while viewing web pages, including scanning for key words, meaningful subheadings, and bullets (Hallahan, 2001).

Developments in web design have opened the opportunity for multimedia applications to be used as aids in communicating health care information. These applications have been explored and found to harbor the potential to improve communication with those with low health literacy by reducing reading demands and presenting information through the spoken word and images that convey meaning (Kandula et al., 2009). Varied methods of

communicating health care information may help to bridge communication gaps often associated with a wide audience range such as the urban population targeted by the REACH Program.

The REACH Program encountered further complications in communication due to its non-profit organizational efforts. Like other non-profit organizations, the program encountered greater difficulties in web site development than for-profit organizations due to a limited public relations budget and limited technological resources. The Internet offers a unique opportunity for non-profit organizations to reach varied publics without enormous financial burdens associated with other public relations media (Kang & Norton, 2004); however, in order for the organization to capitalize on these opportunities, a structured approach must be taken in its web site design process.

2.2 Common Web Designs of Non-Profit Organizations: A Comparison

There are several common organizational goals exhibited by most non-profit organizations in their public relations campaigns, most notably education, public outreach, and fundraising. These goals are communicated to publics in various ways in these programs' website content. This section offers an examination of the similarities and differences in web design and site content of several programs similar in mission to the REACH Program.

The REACH Program. The REACH Program website (www.reachfoundation.net) served several functions: it provided general information on the program's services, history, and staff, and displayed several news stories and the accolades accumulated since

the program’s founding in 2003. The website had a clear, distinct design that was conserved between pages (Figure 1); however, limitations of the website content included outdated program information and lengthy text (Figure 2). Other limitations included a non-functional community forum and a lack of links to community resources within the Caritas Health Care System.



Figure 1. REACH Program website homepage

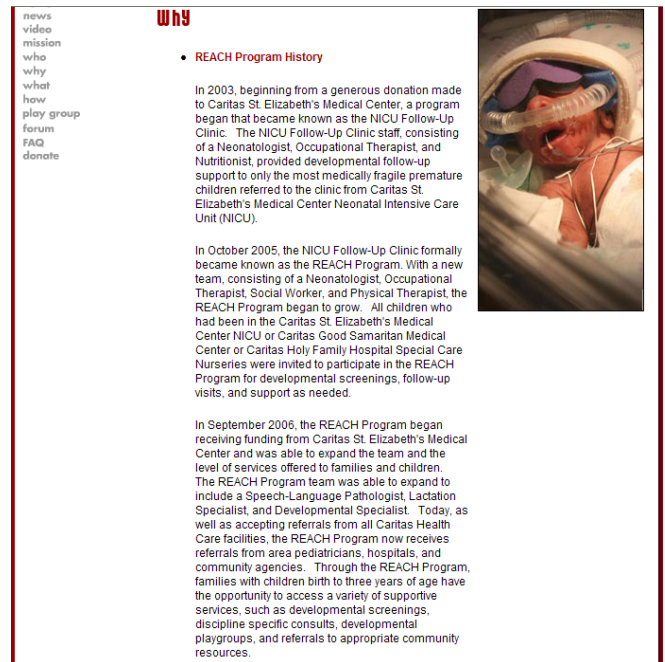


Figure 2. Sample REACH Program webpage

Opportunities for improvement within the REACH Program website were numerous; we believed that the addition of updated program information, links to community resources, multimedia resources, and more prominent invitations to volunteer and/or donate would greatly increase the impact of the website’s messaging.

The Guild of St. Agnes. The Guild of St. Agnes provides developmental education to children through the age of five, and childhood education for ages 4 weeks through 12 years. While several of its services – including day care programs and nutritional

programs – differ from those of the REACH Program, the Guild of St. Agnes has a well designed website (www.guildofstagnes.org) that is an excellent resource for potential visitors.

Positive attributes of the program’s website include a conserved layout between all pages, a singular taskbar menu across the top of each page for easy navigation (Figure 3), and subheadings to break up lengthy text. The site also contains a distinct “You Can Help” tab, which directs the site visitor to a page detailing the various ways that interested parties can volunteer their time, or make a monetary donation.



Figure 3. Guild of St. Agnes homepage



Figure 4. Guild of St. Agnes outreach page

Other Similar Non-Profit Programs. A variety of non-profit outreach programs similar to the REACH Program currently operate in the Greater Boston area, most with websites of their own. Table 1 offers a comparison of the services offered by six other non-profit organizations with those services offered by REACH; the services of these non-profits encompass a broad spectrum, ranging from developmental screenings through child welfare and family services. We conducted an internet search for family services

provided by non-profit organizations in the Greater Boston area, and analyzed the results for program similarities to the REACH Program. Table 1 offers a summary of our findings, all of which were taken into consideration during our website design, and also describes the characteristics of each of the non-profit websites examined. Specifically, the websites are described as each relates to communicating with their respective target audiences. Each website was analyzed using the methods described by Kang and Norton (2004); these methods include the ease of interface, information provider functions, and relational communication categories of content.

Ease of interface: this characteristic examines the simplicity of layout/design and the utility of the website.

Information provider functions: this characteristic evaluates active strategies inviting site visitors to return, as well as links to other resources potentially useful to the target audience.

Relational communication: this characteristic evaluates the site's interactivity with site visitors.

Table 1. Comparison and analysis of Boston-area non-profit organization website content

Organization	Web Address	Ease of Interface	Information Provider Functions	Relational Communication
REACH Program	www.reachfoundation.net	Conserved web page design throughout all pages; single menu along left side of each page. Lengthy text on several pages.	Few links to other NPO websites; donation page is functional (linked to PayPal).	One news video listed; forum is not functional; no other multimedia content.
Guild of St. Agnes	www.guildofstagnes.org	Conserved web page design throughout all pages; uses subheadings to break up text.	Page of links to other local NPO websites; well-detailed donation page clearly marked.	No multimedia content.
Y.O.U. Inc.	www.youinc.org	Pages all have same basic layout design, but different colors; site is complex; menu bar does not direct site visitor to all available pages.	Internship/volunteer, donation, and services tabs clearly labeled. Links to other NPO websites are difficult to find.	Flash content on most pages (including introduction presentation); several videos are contained within a separate tab.
United Way of Massachusetts Bay and Merrimack Valley	http://supportunitedway.org	Each page has a similar layout, but much content; text and other content is broken up by colored headings and Flash animations that are often distracting to the user.	Donation page and volunteer opportunities are clearly labeled.	Flash content on most pages.
UMass Memorial Children's Medical Center	http://www.umassmemorial.org/medicalcenterIP.cfm?id=2053	Each page follows a similar layout and has limited text, but there are an overwhelming amount of menu options. Content is difficult to filter through.	Donation/volunteer page is listed in the middle of a large side menu; might be easily overlooked.	Photos are shown at the top of each page, but very little multimedia content is on the site in general.
Boys and Girls Club of Boston	http://www.bgcb.org/	Each page follows similar layout; text is broken up with bolded subheadings, but is difficult to read because of small size.	Donation tabs are in several locations, very clearly labeled.	Flash content on most pages.
YMCA of Boston	http://www.ymcaboston.org/	Conserved layout for each page; conserved, simple color scheme; lengthy text on several pages. Menu along top side of each web page; drop down menus provide additional choices.	Links to Facebook and Twitter pages on home page; Google Translator available. Clearly labeled donation page.	Overuse of Flash content on most pages; often distracting to the users.

Similarities in Web Site Design and Content. In the seven program websites examined, several key similarities in content and design were noted. All seven websites were aesthetically pleasing, with web pages designed in various color schemes; four programs (Guild of St. Agnes, Y.O.U., Inc., UMass Memorial Children's, and the Boys and Girls Club) made distinct use of bolded page titles and subtitles used in text breaks. Elements that were similar in most of the web sites, but designed or placed differently on the pages themselves, included search boxes and driving directions.

Organizational information on each webpage was strategically included for the benefit of any interested parties visiting the webpage. Several key pieces of information were noted on each web site:

1. Physical address and phone number of the organization
2. Overview of the organization's mission and goals
3. Description of programs and services offered by the organization

Variation in Web Site Design and Content. Web site design is a targeted public relations and marketing effort; to be effective, it must be strategically orchestrated with the wants and needs of a stakeholder audience in mind (Kent et al., 2003). Web site elements often differ due to the perceived needs of an organization's stakeholders – thus, various differences in content were noted during analysis of the different program web pages.

Calendar: the Y.O.U., Inc. and YMCA web sites provide up-to-date event calendars for the programs and services they each offer.

Staff information: each website provided some level of staff information, ranging from a single contact name and phone number to individual staff descriptions and contact information.

Feedback: several programs (Guild of St. Agnes, United Way, UMass Memorial Childrens, and the Boys and Girls Club) provide online forms for site browsers to send feedback, etc. to the program staff via email.

During our review, several items provided by individual programs' web sites stood out as particularly helpful for program enrollees:

Media and Video: this link is featured on the Y.O.U. Inc. website. It is a visual media gallery that allows page visitors to view the current work of students, various company events, and several agency topics.

Weather Information: the Boys and Girls Club of Boston web site features a link that displays postings of any closings for the program's daily programs.

After the close examination of the six selected program websites, several key website features were clear necessities for effective information dissemination: current organizational information (address, contact information, etc.), clear program and service descriptions, and elements of interactivity (visual media, feedback forms, etc.). The lack of some of these elements in the current REACH Program website suggested that improvements could be made to better disseminate information to website visitors.

2.3 Web Development Technologies

Developments in software design have allowed previously complicated web site design techniques to be performed by individuals having no knowledge of HTML coding. Some

HTML editor software packages now perform the coding for the user with the click of a mouse, and content management systems can provide templates for users to build out and maintain websites with ease. This section provides an overview of the two types of web site development tools that were examined and considered for use in our development of the new REACH Program web site.

Content Management Systems. Content management systems are tools designed to create, edit, manage, and publish a variety of digital content (ContentManager.eu.com, 2008). The construction of web sites is a complex process; a web site content management system manages the HTML coding required for site design and simplifies the design process with built-in templates, real-time page views, etc. The software enables individuals with little to no experience in HTML coding, etc. to create and manage websites with ease.

HTML Editors. HTML (hypertext mark-up language) is the primary coding language used in web documents. The language formats both images and text; HTML editors are software applications that enable those with little to no experience in HTML coding to create websites much like those created with the aid of content management systems.

2.4 Social Networking Applications

Social networking is quickly becoming an important public relations tool for non-profit and for-profit organizations alike. Online social networking sites are web-based services that allow individuals to (Boyd & Ellison, 2008): (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share

a connection, and (3) view and traverse their list of connections and those made by others within the system. The first social networking sites (i.e. SixDegrees.com) were created in the late 1990s; ten years later, social networking sites had exploded in popularity (Wilson, 2009). Sites such as Facebook, MySpace, LinkedIn, and Twitter have been developed to reach a wide range of audiences, and are increasingly used by organizations in all industries to reach out to potential publics. These applications allow individuals and organizations to upload videos, pictures, web links and other information to encourage communication. Social networking appeals to a wide variety of audiences and to the demands of twenty-first century life; in today's fast-paced world, individuals desire systems that are quick, easy to use, and most importantly, right at their fingertips (Kumar & Bukhair, 2008).

2.5 Conclusions

Based on our background research, we concluded that in order to effectively communicate information with enrolled families and targeted publics, the REACH Program required a more current website. The website content needed to be tailored to be easily read by a variety of literacy levels, and the site designed to include a range of community resources and program information. The site layout needed to be easily navigated by site visitors, and built on a platform that allowed program staff to update and maintain the site in a timely manner.

While the REACH Program desired a means for families to connect with one another outside of organized playgroups, etc., our analysis indicated that forums, etc. are a highly complex functionality of web sites that would require frequent management and

maintenance by the REACH Program. We concluded that the limited resources (i.e. time, technical knowledge, etc.) of the staff, along with their increasing workload, would prevent effective management of such forums. We believed that social networking applications would be a simple, effective solution to this issue, as they are virtually free of daily maintenance.

3. METHODOLOGY

The goal of this project was to develop a website for the REACH Program that addressed the program’s needs and helped to disseminate information to families enrolled in the program. In order to accomplish this goal, we used a systems design and analysis methodology (Figure 5) (Dennis et al, 2009).

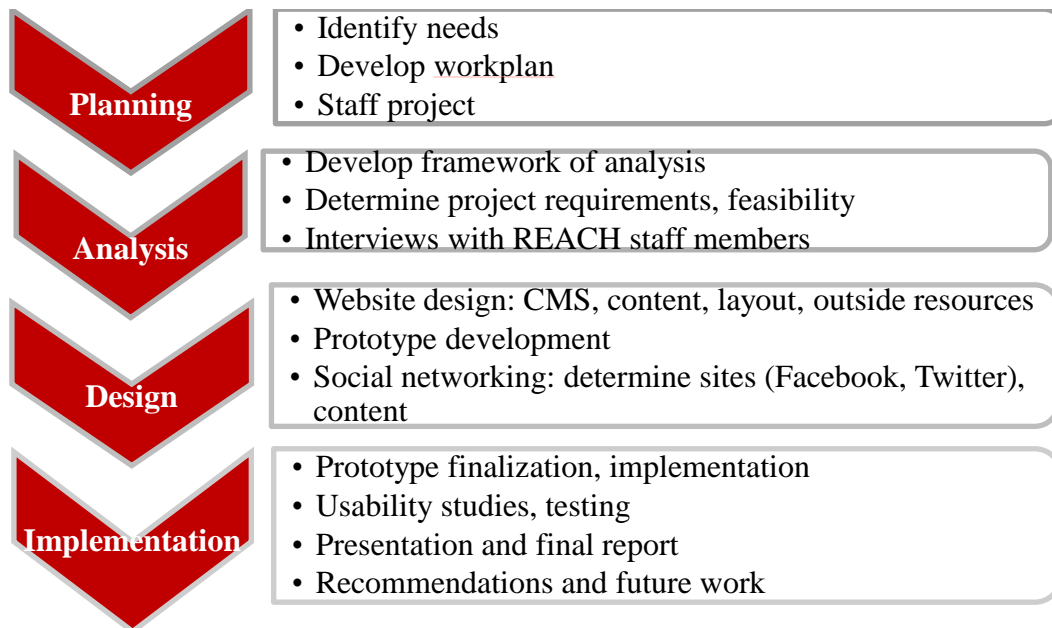


Figure 5. Project methodology

This methodology outlined four key stages: planning, analysis, design and implementation. Careful planning and analysis was first conducted to collect user and content specifics; after this phase was completed, the Drupal CMS platform was selected, and site design began. Social networking pages, utilizing the Facebook and Twitter networks, were created and implemented with the site design. The new social networking pages and website were implemented for the REACH Program and demonstrated to the staff to facilitate basic user training and utilization.

4. RESULTS

Our results were evaluated throughout this project, and are detailed herein by the stage of our methodology (Figure 5).

4.1 Planning

We began this project with an analysis of the REACH Program's needs for effective web communication. An initial onsite meeting with our sponsor determined that the greatest difficulty the staff was having was with their current website. The staff of the REACH Program expressed interest in redesigning the program's website (www.reachfoundation.net) to make it more informative about the community resources, to have greater usability by both staff and families, and to increase the program's outreach to the community. Their current website provided a general overview of the program's mission, but failed to provide detailed, up-to-date information on services and programs, other community resources within the Caritas Christi Health Care network, and similar information. While the staff was able to suggest new resources and provide materials to families enrolled in the program, they were unable to access and update the program website. They desired to give families the option and ability to share their information with other families who wanted to make connections outside of the program. The lack of site access and management inhibited the revision of website material and the distribution of information to both enrolled and potential families. The staff also desired to more effectively communicate time-sensitive information, such as scheduling changes, to enrolled families. The staff was using a voicemail system that parents could call in times of inclement weather, etc., but the staff needed a solution that would also enable them to reach families when scheduling changes occur due to other factors.

Meeting with our sponsor enabled us to develop a workplan (Figure 6) outlining our major project milestones, meeting schedules, and the division of tasks to be accomplished. We determined that weekly, one hour meetings with our academic advisor were needed to assist us with technology analysis, presentation preparation, report writing, etc., and also to assist in keeping the project on schedule. We determined that we also needed to meet as a team at least once per week outside of our advisor meetings; the length and frequency of these meetings would be adjusted to best complete tasks each week. Since the project content was largely subjective, we also determined that weekly emails with our sponsor were necessary to solicit feedback and gather the information and resources we needed to design and implement new web-based communications.

In order to deliver the results our sponsor desired, we needed to develop a timeline of milestones to guide our work on this project. A detailed schedule of our milestones can be found in Figure 6.

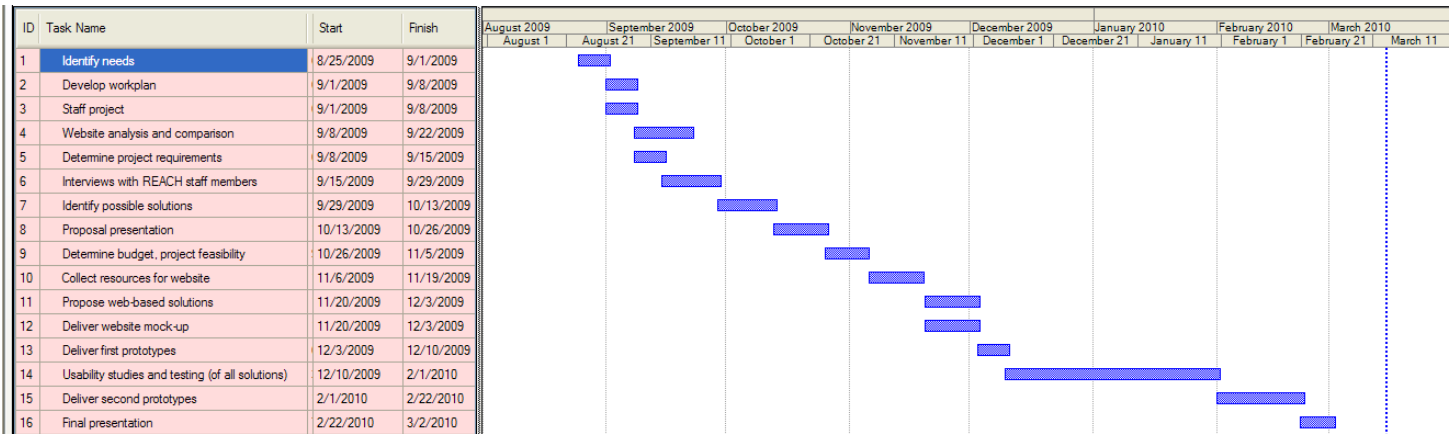


Figure 6. Project Timeline

In order to develop a system to analyze the REACH Program web site, as well as web sites of similar programs, we looked to the literature. Our comparisons and analysis were synthesized from several sources, including Kang and Norton (2004) and Becker and Mottay (2001).

4.2.1 Review of the Literature

Kang and Norton described an evaluation framework specific to web applications specific to non-profit organization. Evaluating information technology, particularly in the area of health care systems, has proven especially difficult due to the expansive range of topics and stakeholders (patients, medical professionals, administration, etc.) in health care; stakeholders may desire specific requirements quite different from those of another stakeholder party, which makes the generation of evaluation questions difficult (Ammenworth et al., 2003). Kang and Norton examined the web sites and communication strategies of 100 American non-profit organizations, and compared their findings to the ability of the non-profits to effectively communicate with their potential publics via their web sites (2004). Their findings indicated that the most effective web sites addressed the following three objectives:

1. **Ease of interface:** this characteristic examines the simplicity of layout/design and the utility of the website.
2. **Information provider functions:** this characteristic evaluates active strategies inviting site visitors to return, as well as links to other resources potentially useful to the target audience.

3. **Relational communication:** this characteristic evaluates the site's interactivity with site visitors.

While Kang and Norton's study helped to shed light on effective communication with potential publics via the web, it failed to address the often varied audiences that view a particular site. The audience of any web site, whether of a for-profit organization or a non-profit organization, is varied in gender, socio-economic background, age, and education level. Often, web sites are designed without regard for these differences, and the usability of the site by users, therefore, declines in some audiences. To address this issue in e-commerce sites, Becker and Mottay developed a usability assessment model (Figure 7) useful for analyzing the characteristics of a web site that affect the site's utility.

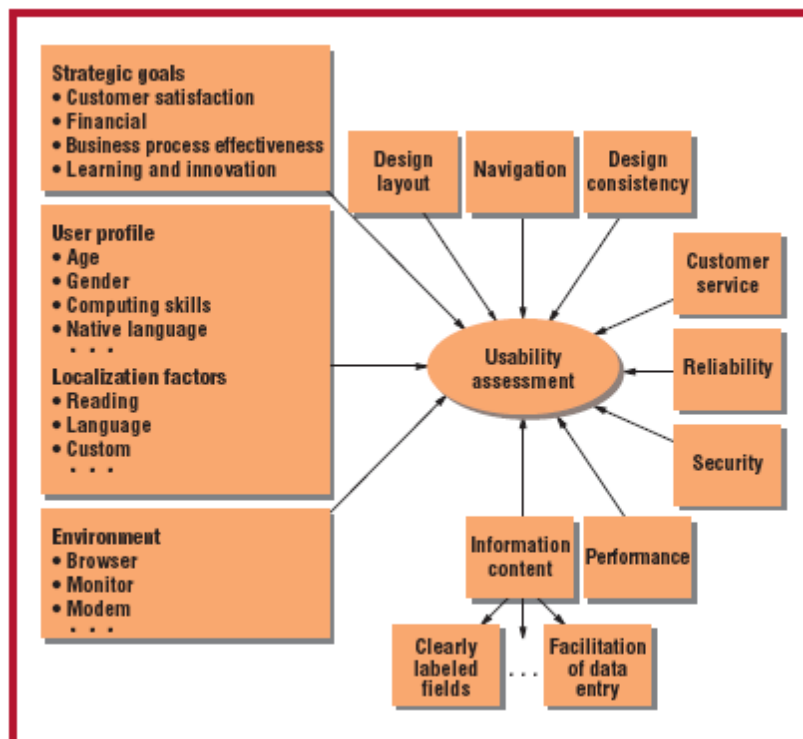


Figure 7. Usability assessment model (Becker and Mottay, 2001).

While both models offer useful points for analyzing the utility of web site content, neither is directly tailored to examine the design and content of a non-profit program web site. In order to examine the program web sites (Table 1), we merged points from each model to create a custom framework (Table 2) in order to effectively examine the characteristics of the web sites considered herein.

Table 2. Framework for non-profit health care website usability analysis

Web Site Element	Characteristics Examined
Site and Page Layout	<ul style="list-style-type: none"> ▪ Font size, color ▪ Background color ▪ Appropriate use of white space
Design Consistency	<ul style="list-style-type: none"> ▪ Consistency of layout (frames) throughout all site pages ▪ Consistency of coloring: links, text, background
Ease of Navigation	<ul style="list-style-type: none"> ▪ Links, pages labeled clearly ▪ Links appropriately named ▪ Page content is related to page titles and/or headings ▪ Scrolling: vertical and /or horizontal
Information Content	<ul style="list-style-type: none"> ▪ Timely and correct messaging: schedules, announcements, contact information, etc. ▪ Staff, location information ▪ Program information
Relational Communication	<ul style="list-style-type: none"> ▪ Multimedia elements: pictures, video, Flash presentations, etc. ▪ Resources: documents (Word or PDF formats), presentations, links other programs, etc. ▪ Options for contacting program staff: feedback forms, link to email, etc.

In order to qualitatively assess the six programs examined for comparison, we used the characteristics described in the table above as follows:

1. **Site and Page Layout** – These elements describe the visual layout of the site. Characteristics to consider when examining these elements include the appropriate use of background color, white space, scrolling, and other various design components. These items address ease of use and visual appeal.
2. **Design Consistency** – Design consistency is important in aiding users in easily finding items of interest within the site.
3. **Ease of Navigation** – This element describes the path(s) needed to find items of interest throughout the website. Items of interest include things such as page links; system response time to user requests also affects the speed of navigation.
4. **Information Content** – This includes information availability to the user and how it is done so. Things like error messages, prompts, descriptions, contact information, and customer service all fall into this category.
5. **Relational Communication** –Relational elements of web pages aid the user in directly contacting program staff, or viewing/obtaining additional information and/or resources they might not otherwise obtain from a purely text web page.

4.2.2 Benchmarking. Using the framework of criteria defined in Table 2, we were able to analyze the usability of seven web sites in total. These web sites included the current REACH Program web site, and the web sites of six other similar non-profit programs in the Greater Boston area (Appendix A). A summary of our analysis can be found in Table 3.

Table 3. Usability Assessment of Non-Profit Websites

	Site and Page Layout	Design Consistency	Ease of Navigation	Information Content	Relational Communication
REACH Program	Consistent background color scheme; text in white (stands out), normal front size	Conserved web page design throughout; menu prompts well spaced in bold; basic design with contact information at bottom of page and topic choices along left margin	Limited scrolling required, rapid loading time; however, both are due to lack of information selection choices	Description of programs and services; overview of mission, goals; contact information	Few links to other NPO sites; donation page linked to PayPal; one news video; forum not functional; no other multimedia content
Guild of St. Agnes	Topics clearly noticeable in white; well-balanced background colors	Conserved web page design throughout; basic menu tabs	Tabs well defined; navigation easy due to good path choices with direct links to information; limited response time	Description of programs and services; overview of mission, goals; contact information; curriculum is well-described	Feedback form; page of links to other NPO sites; no multimedia content; donation and volunteer tabs
Y.O.U. Inc.	Multiple graphics, pictures, and colors spread around home page; difficult to locate menu items	Same layout throughout but in different colors, consistent basic design with topic choices along left margin and tool bar at bottom of page	Subheadings to break up text, but multiple links result in longer navigation time; multiple graphics result in slow site loading.	Description of programs and services; overview of mission, goals; contact information	Media and video visual gallery; videos and Flash content throughout; internship and volunteer tabs; donation tab; links to other NPO sites
United Way of Massachusetts Bay and Merrimack Valley	Graphics/photos; various background colors; Flash Media box distracts page viewers from textual content	Colored headings; similar layout throughout the site; basic design with topic choices along left margin and tool bar on bottom of page	Some delay with response time; selected topics have paths easily leading to destination	Description of programs and services; overview of mission, goals; contact information	Feedback form, donation page, volunteer opportunities, advocacy; Flash content on most pages
UMass Memorial Children's Medical Center	Text size small; some pictures/photos; various colors and plenty of white space	Conserved layout throughout; limited text; overwhelming menu options	Poor topic detail causing selection of multiple links, difficult to locate specific information, slight response time delay	Description of programs and services; overview of mission, goals; contact information	Feedback form; donation/volunteer page; rich in multimedia; Family Resource Library and Pediatric Family Resource Library
Boys and Girls Club of Boston	Small front; multiple graphics, photos	Layouts vary from page to page throughout site; bold subheadings; top menu is displayed through main content of page, making text difficult to follow	ActiveX required; simple navigation paths due to limited information; low performance due to heavy scrolling	Description of programs and services; overview of mission, goals; contact information; weather information and cancellations displayed	Feedback form; donation tabs in several locations; Flash content on most pages
YMCA of Boston	Well-balanced background colors; topics clearly defined due to use of bold white text	Conserved layout throughout; well-defined information boxes	Easy navigation; limited response time; numerous topic tabs may result in delayed browsing time	Contact information; overview of mission and program schedules provided	Links to membership and donation pages; links to Facebook and Twitter provided; Google translator also available on site

Our usability assessment of similar NPO websites in the Greater Boston area (Appendix A) produced the following details:

1. REACH Program Web Site

The REACH web site featured a consistent text, layout, and background color scheme. A menu of prompts was along the left side of the page, each well-spaced and in bold text. There was limited scrolling required, due to the lack of information selection choices. The loading time of the site was rapid, but this was most likely due to the minimal amount of information and various inactive links (i.e. forums link). The site layout was a consistent, basic design, listing contact information on the bottom of the page and topic choices along the left margin of the page.

2. Guild of St. Agnes

The Guild of St. Agnes website also had photos of children and well-balanced background colors. The topic choices were located along the top of the page and were clearly distinguished in bold, white text. When accessed, the links allowed the user to see additional choices of subjects. Topic choices appeared and items uploaded quickly. The site navigation was easy, and the path choices led site browsers directly to the information through the site links. The site map and contact information were easy to find under the “What About Us” tab. The tabs leading to applications, financial donations and volunteer were simple to understand and follow. Program curriculums were well described. The performance of the site was rated to be excellent, and had limited response time.

3. Y.O.U. Inc.

The Y.O.U. Inc. website contained multiple graphic elements, including various photos and background colors. Items were spread around the entirety of the home page, making it difficult to locate information. This caused users to scan the page slowly in order to find items. Topic choices were in white lettering, making them more easily visible to the user. Topic selection resulted in additional choices in page format, resulting in delayed site navigation to desired pages. The site's page layout was convoluted and poorly designed, resulting in the inability to find specific/desired information. The site's page layout was consistent throughout, with topic choices along the left margin and a tool bar along the bottom of each page. Contact information and directions were included in the tool bars. Multiple graphics on each page resulted in delayed response time and poor site performance.

4. United Way

The United Way website displayed various graphics, photos, and background colors. Lengthy text and graphics placed in the middle of the web pages required users to scroll down each page in order to view all of the information contained on the site. A Flash Media box, located on the right side of each page, provided changing graphics, causing distractions to the reader. Design layout was basic, with a left margin menu and a tool bar at the bottom of each page. Each page displayed delayed loading times, perhaps due to the Flash media.

5. UMass Memorial Children’s Medical Center

The UMass Memorial Children’s website displayed various bright colors, and multiple photos and graphics. These complex elements resulted in delayed page loading. Page text was small, and each page had an overabundance of unused “white space.” A left margin menu provided a variety of topic/subject choices, but each was poorly named and resulted in poor path navigation for site readers. The site did, however, contain multiple informational references to other resources at UMass Memorial Medical Center (i.e. Family Resource Center, Pediatric Family Resource Library).

6. Boys & Girls Club

The Boys & Girls Club website has various complex layout elements, including multi-colored backgrounds, Flash media, and ActiveX elements. A horizontal menu toolbar extends through the main content frames of the page, distracting page viewers from the page text. Topic information is limited, which provides little information but eliminates complex navigation paths. Load time should, therefore, be faster because of the limited text, but various layouts throughout the site result in slow loading time, large amounts of scrolling, and decreased overall site performance.

We worked together, frequently soliciting the staff’s feedback and input, to investigate means of creating a user-friendly, easily maintained website for the REACH Program. It was also necessary to create a site that was both attractive and easy-to-read (for all reading levels), as well as inviting enough to solicit website readers to look into the program further. In order to accomplish this, we developed a benchmarking framework based on the literature (Table 2). We

conducted an internet search to find non-profit organizations in the Greater Boston area that offered developmental programs comparable to those of the REACH Program (Appendix A), and used the framework developed to analyze and compare them to the REACH Program's website (Table 3). From our analysis, we determined that site usability was of great importance in web-based communication. Sites that were difficult to navigate, loaded slowly due to multiple multimedia elements in page content, and poorly organized were ineffective in communicating information about the programs themselves and the services offered.

4.2.3 Requirement Gathering. To determine the needs for the REACH Program website, we first needed to compile requirements from the REACH team, as they would take over maintenance of the website at the conclusion of the project. A preliminary meeting with several staff members (i.e. Jacqui Stockton, Nicole Croak, Lori Parent) was held in late August, and the following questions posed:

1. What does the REACH Program do?
2. Why does a new website need to be created for the REACH Program?
3. What are the best elements of the current website? Should any of these elements be included in the new website?
4. What audience is the website intended for?
5. What functionalities would you like the website to have?
6. What information would you like to communicate to your intended audience via the website?

After meeting with the staff, several key needs and requests were deduced:

1. Organizational Growth: The REACH Program was in a state of rapid organizational change. Due to limited funding, staff members worked part-time schedules, and the staff did not include a member whose sole responsibility was to maintain files, contact information, etc. The staff requested a website that enabled user registration for playgroups and consultations, family feedback on services received, and could allow the staff to run data reports on the information submitted. Increasing enrollment in the program continued to make it difficult for the REACH staff to respond in a timely manner to requests for program information, as well as the program's handouts.
2. Ease of Maintenance: The current REACH Program website was out-of-date due to a lack of technical knowledge among staff members. The site was designed several years ago; while it remained visually attractive, staff members were unable to maintain the website due to the site's heavy coding.
3. Funding: Due to limited funding, the program was unable to afford the large expense often associated with professional website design and maintenance. The only costs the group was comfortable with taking on were annual hosting fees, which were already purchased for their existing website and
4. Varied Audience: Due to the program's Greater Boston area location, the families enrolled in the REACH Program spanned a large range of socioeconomic backgrounds and family dynamics. The staff stressed the importance of providing accurate information to families in a manner that they could understand when accessing the website in the privacy of their homes.

4.2.4 Requirements. In order to design an appropriate web site for the REACH Program, the needs and desires of the program first needed to be identified. Based upon our analysis of the literature and available technological applications, as well as various exchanges (i.e. emails, conference calls, onsite meetings) with staff members, we identified the following needs for an effective new website:

Content:

- Updated program information for play groups, screenings, etc.
- Updated contact information for all staff members
- A means for enrolled families to reach out to one another outside of play groups and other organized programming

Design:

- Visually appealing, simple page design; consistent color scheme; easy-to-read font.
- Format should be conserved through all web pages.

Usability:

- Web page design built on a platform that enables staff members to easily update site content
- Ease of use: page content should be tailored to be attractive, but must load quickly to encourage further browsing

During our in-personal meetings and conference calls with the REACH staff, we determined the specific information they desired to communicate through their web communications.

Discussions and file exchanges spanning a period of several months provided the following information for use on the website:

1. Updated staff photos
2. Playgroup information and descriptions
3. REACH Program logo
4. Photos (from the original website)
5. Program handouts, brochures
6. Program policies (i.e. sick, playgroup, cancellation, safety policies)
7. Donation information
8. Staff biographies
9. Driving directions
10. History, mission, and goals of the program
11. Services provided and offered
12. Facts and questions (FAQs)
13. Links to other useful NPO websites
14. Contact information

4.3 Design

Before determining the site design solution we would implement, it was necessary for us to determine what information the REACH Program desired to have on its website, as well as what

information and resources they were permitted by hospital policy, legislation, etc. to disseminate. This information was gathered during our analysis phase (see section 4.2.3), and then compiled in a website mock-up (Appendix B). This mock-up was presented to and approved by members of the REACH staff (Jacqueline Stockton and Nicole Croak) via email.

We designed the menus to be on both the top side such as (1) About us , (2) Who We Are, (3) FAQs, (4) Directions, and (5) Contact Us and the left side such as (1) Registration, (2) Services, (3) Playgroups and (4) Family Resources. All these provided tabs are the general organizational information is separate from the specific service and program details. The general organizational information was placed at the top while the specific service and program details were placed on the left side. We decided to carry over some tabs such as About Us, Who We Are, and Contact us over to the new website, while we came up with our own new tabs such as FAQs, Directions, Registration, Services, Playgroups, and Family Resources. We came up with these tabs because it would make a huge impact on the website and easier work for the R.E.A.C.H program staff members to do less work. The families will have all these provided tabs on the new website without having any problems or questions and can fill out the applications registrations and family resources such as feedback forms online as well. We didn't carry over the News tabs from the old website to the new website because we including the R.E.A.C.H. staff members decided to do advertisements instead such as newsite and social networking instead.

As for the choice of colors, we decided to primarily use maroon because it is the main color theme of the R.E.A.C.H. program. In addition, the website layout was designed to appear both professional and user-friendly since it is essential to attract and keep people accessing the website. The most important pieces of information are in the text of the website in order to

maintain compliance with program-specific and general health policies, rules, and regulations. This new website will allow the staff members to maintain and have access to both their website and information, and will satisfy the needs of the organization and its families and users of the organizations of the R.E.A.C.H. program. The website's high degree of user-friendliness and visibility achieves this for the program. This information was copied from the old website to the new website and given to us by the R.E.A.C.H. program staff members. In addition, we copied the overview mission and goal of the R.E.A.C.H program as well as the staff and program's contact information from the old website to the new website.

Each page directs the site viewer towards the photographs, graphics and any other pages displayed on the website, such as attached documents, uploaded appointments, and feedback and registration forums. Also, R.E.A.C.H. program staff members provided us with handouts and fliers to upload the new website as well as providing us the registration and feedback forums handouts to provided them online for them as well. This allowed the staff members to concentrate less on answering phone calls from interested families or questions for families that are currently in the program allowing them to focus their time on improving other aspects of the program.

In addition, the links to community resources, and the more prominent invitations to volunteer and/or donate will increase the impact of the website on the program achieving its goals. The new website's improved design will be effective with attracting the attentions of users to view the website, which in the long-term will improve the program's public relation. We wanted to provide a video section on the new website because the old website had a video and we discussed it with the R.E.A.C.H. program staff members that they decided that the new website

will not provide any videos. In addition, for whatever reasons, they think it is not worth the time to make a new video and post it since we all have provided enough discussed information on the new website including the two social networking along with it.

4.4 Implementation

To begin the implementation phase of our methodology, we needed to identify various options for web site design and maintenance for the REACH Program's new website, and various options for social networking initiatives for the program to better communicate with enrolled and potentially families. Our analysis identified three potential applications for website design: Sitefinity, Drupal, and Adobe Dreamweaver CS4. Further, we identified four potential social networking sites: MySpace, Facebook, LinkedIn, and Twitter.

4.4.1 Website Design Applications

1. Sitefinity: Content Management System. Sitefinity is a web-based content management system designed for the development of commercial websites (Sitefinity.com, 2009). The program is designed to be user-friendly to users of all backgrounds; built-in templates aid in page design to help minimize the amount of coding required by the parties designing a site. Third-party programs (referred to as 'modules') are available for integration with Sitefinity to aid in building out content such as documents and blogs within the web site. Healthcare organizations using the system for their website platforms include the Baptist Healthcare System, the Colorado Center for Medicine, and the Academy of Neuropsychology (Sitefinity.com, 2009; Figure 8).



Figure 8. National Academy of Neuropsychology homepage
<http://www.nanonline.org/NAN/home/home.aspx>

2. Drupal: Content Management System. The Drupal content management system is a user-developed and maintained open-source software. It is freely available for download by all from the system website (www.drupal.org). Web sites built on the Drupal platform are easily maintained and edited by single and community users alike.

Should site developers require coding or customization beyond the basic platform available with download, there are a multitude of modules freely available via the Drupal website. Users who have familiarity with PHP, a scripting language that is built into HTML code, as well as MySQL, a database management system program, may also include custom code (Drupal.org, 2009). The program's ease of use and adaptability are evident in its list of users (Figure 9), which include companies such as AOL Corporate and Sony Music, as well as institutions of higher learning such as Amherst College (Drupal.org, 2009).



Figure 9. New York State Senate homepage (<http://www.nysenate.gov/>), based on the Drupal platform.

Adobe Dreamweaver CS4: HTML Editor. Dreamweaver is an HTML editor software program available in the Adobe line of products. It is available as a standalone product, or as part of a line of larger packages (Creative Suites) that includes various other content editor programs (Table 3). The program limits the amount of custom code that users must write in order to design websites; Dreamweaver enables users to view their site changes in real-time, and incorporates support for various JavaScript frameworks (Adobe.com, 2009).

Table 4. Cost-benefit analysis of considered technologies for web site design

Application	Type of Application	Implementation Cost	Benefits
Sitefinity (Version 3.6)	CMS	<ul style="list-style-type: none"> ▪ Community license: Free ▪ Standard Edition license: \$899 annually per license; includes support services ▪ Support and training are also available through over 60 third-party providers 	<ul style="list-style-type: none"> ▪ Software comes with ready to use ‘modules’ to aid in customizing web site content; modules include blogs, polls/forums, images, etc. ▪ Software stores ‘versions’ of all content and saves them to a database for comparison, later use, etc. ▪ ‘Drag and drop’ feature: content frames can be dragged to new positions with click of a mouse.
Drupal	CMS	<ul style="list-style-type: none"> ▪ Free download and installation ▪ Themes, modules created and licensed by Drupal are free; custom work by third-party consultants ▪ Commercial support available by Acquia; subscriptions range \$349-8,000/year 	<ul style="list-style-type: none"> ▪ Supports podcasts, social networking, photo galleries, and intranet applications. ▪ Site content can be edited by either single user or community of users. ▪ All content is indexed and searchable ▪ Software allows administrators to run reports of web site views, content popularity, etc.
Adobe Dreamweaver CS4	HTML Editor	<p>Stand alone cost: \$399 (single license) Cost as part of the Adobe Suite Creative Bundle: \$999-2499</p>	<ul style="list-style-type: none"> ▪ Has several ways to edit/view your webpage <ul style="list-style-type: none"> Design view: visually design web pages Code view: manually code Live view: see in-process pages as if it was in a web browser ▪ Integrated with Photoshop, Flash, Fireworks

4.4.2 Social Networking Applications

1. **Facebook.** The social networking site Facebook was originally created to connect college-aged web users with one another, but has grown in size and popularity over the last several years to include an active user base of over 300 million accounts (Facebook, 2009). The site boasts a wide variety of communication tools, including “wall posts”, photo albums, groups based on personal preferences, videos, a built-in instant messenger application, and fan pages (Figures 10 and 11).

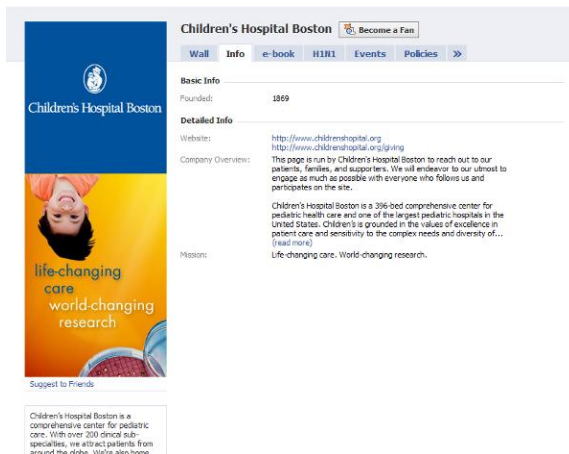


Figure 10. Children's Hospital Boston Facebook fan page



Figure 11. Big Brothers Big Sisters of America fan page

Facebook networks allow any user to create and manage groups to share information about common interests, resources, and to maintain relationships. The success and widespread use of the site has resulted in many businesses to begin using Facebook applications. Because of the increase of users, it has become a great form of advertising – not only does it generate company recognition, but it also acts as a portal for users to connect directly to

company websites. Facebook users can view company profiles and view post about products and marketing. Companies have also begun using consumer comments to improve their customer service (Sorenson, 2009).

3. MySpace. Formerly the most popular online social networking site prior to the rise of Facebook, MySpace offers applications similar to Facebook, but also features pages (Figure 12) and applications catered to entertainment (i.e. up and coming comedians, musical artists) to allow greater exposure. Other applications frequently used by businesses include groups and bulletins, which allow for the posting of information for large groups of site users to view.



Figure 12. Sample MySpace musician page

4. LinkedIn. While Facebook and MySpace offer the development of online social networks, LinkedIn offers networking based in business and career

opportunities. LinkedIn allows users to develop and maintain professional profiles (Figure 13) detailing their education, current and former positions, and other relevant information; contacts are made through industry and personal connections. LinkedIn also allows users to create groups and post events, such as conferences, training sessions, and trade show participation. Companies often use this networking site to create company profiles. Company profiles often feature company information, postings of newly open positions, and company developments.

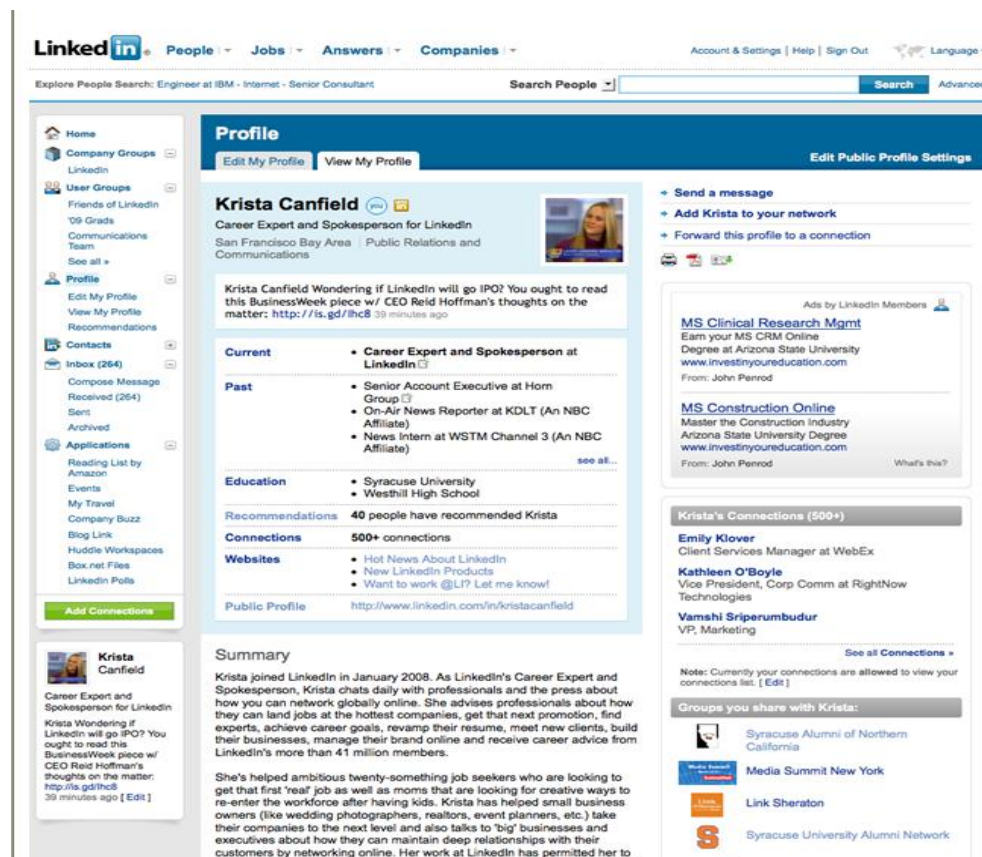


Figure 13. Sample LinkedIn personal profile

5. Twitter. Twitter is a unique social networking service where users communicate via ‘microblogging,’ which entails colloquial communication

using abbreviated words and phrases. Twitter users detail their daily activities in “tweets” (similar to Facebook status updates) in which they are limited to 140 characters (Figure 14). The service allows users to share information in real-time to selected users, or to the Twitter community as a whole. Businesses use Twitter to send messages about their company and products. The service allows them to connect with customers, share information, and receive feedback which helps them make adjustments to products. The social networking site has recently seen a boom in user registration, resulting in mass use of the site by organizations of all sizes and aims. Noted users include Barack Obama, who used it to send campaign messages during the 2009 presidential race, various police and fire departments who use it to notify the public of incidents, and numerous celebrities spreading the word for charities and benefits.



Figure 14. Sample Twitter page

4.4.3 Selection of Website Design Application. Our analysis determined that several website design options were available to us, including the Drupal and Sitefinity content management systems (CMS), and various HTML editors, including Adobe Dreamweaver. A cost-benefit analysis (Table 4) of these options, along with consideration of the REACH Program’s limited budget and technical knowledge, led us to suggest the use of a CMS for the website design. Content management systems simplify the website building process, organizing content in pre-made, customizable templates with little to no coding required. The REACH Program had a limited budget, and desired that reports on website registration, etc. could be run from the site; this led us to suggest the use of the Drupal CMS platform, as it was open source software with various customizable features (called “modules”), including the capability to manage and store data (Table 4).

4.4.4 Prototyping the Website. After approval of the mock-up (Appendix B), the Drupal CMS platform was installed on a local server (i.e. laptop hard drive) to begin development of the website itself. Upon installation of Drupal, however, several difficulties were encountered. Drupal installation required the development of a custom database and the installation of various programs (i.e. MySQL, PHP/Apache) beyond the scope of our technical knowledge, and resulted in weeks of stalled progress as we struggled to complete installation.

To address this problem, the Acquia platform was selected. Acquia, a professional Drupal development site, provided a cost-free, packaged Drupal distribution that included all databases and programs necessary for site installation and development on the Drupal platform. After installation of the Acquia package was complete, an initial website prototype was developed,

based on the mock-up approved by the REACH staff (Appendix B). This initial prototype (Appendix C) detailed several developments:

1. Top and side menus were developed to better separate general organizational information from specific service and program details
2. A conserved color scheme continued using maroon as a primary organizational color
3. Specific file extensions (.jpeg, .gif) were needed in order to insert photographs and the program logo
4. Text from the original website would be conserved and used in the new website to maintain compliance with program-specific and general health care policies

Further development of the website produced a final prototype, presented to the staff for final edits in late February 2010 (Appendix D). At this meeting, staff members Jacqueline Stockton and Lisa Stamios were led through the prototype page-by-page, and given a demonstration of the content editorial capabilities of the Drupal platform. This demonstration was performed to test the simplicity of the Drupal CMS and of the new website's design. Feedback from the staff members present indicated that the site was simple to both navigate and edit, and easy to learn. No content or formatting changes were suggested.

4.4.5 Testing the Website. Website testing was conducted prior to this presentation to ensure the following:

1. Each page contained relevant text
2. Each link was functional and directed the site viewer to the correct page

3. Photos, graphics, and pages displayed correctly in several web browsers (Internet Explorer, Mozilla Firefox, Google Chrome)
4. Attached documents loaded correctly in Adobe Acrobat Reader
5. Web forms submitted correctly: this included the display of appropriate confirmation messages, answers emailed to the correct test email inbox, and the display and storage of submitted answers to the built-in site database.

This final, functional prototype (Appendix D) was presented the REACH staff on March 2, 2010 at our final IQP presentation (Appendix G). In attendance were Dr. Charles Anderson, Jacqueline Stockton, Nicole Croak, Lisa Stamios, and our project advisor Prof. Bengisu Tulu.

4.4.6 Social Networking: Development of Facebook Fan Page and Twitter. Based on our analysis of the available technologies, we suggested the implementation of a Facebook “fan page,” which allows Facebook users to more easily gain information about the program.

Facebook was originally intended to connect college-age web users with one another, but has grown in site and popularity over the last several years to include an active user base of over 300 million accounts. The site boasts a wide variety of communication tools, including "wall posts", photo albums, groups based on personal preferences, videos, a built in instant messenger application, and fan pages. Facebook networks allow users to create and manage groups to share information about common interests, resources, and to maintain relationships.

We chose Facebook along with Twitter because Facebook is the most popular site being used for social networking presently. MySpace has dramatically fewer users and does not offer as many features as Facebook, which makes MySpace less appealing. LinkedIn is more limited since it

focuses on business networking, specifically consisting of the hiring and sharing information of employees. Facebook is both an easier and more productive way to make connections with friends. It also attracts others to become friends because it has more users than the other sites. In addition, a Facebook fan page allows the person or company to send out invitations encouraging everyone to view their information. The REACH program could use Facebook fan pages to send its information to both members and potential members regarding how the program assists children with learning. Having the Facebook fan page connected to Twitter enables those who view the REACH program Facebook page to see the users following the program and read the “tweets” which are the Twitter status updates.

The “tweets” express the reactions and opinions of those who have experienced the program and also allow non-members to ask for information. This provides an opportunity for REACH to respond to those non-member’s requests and make a connection with them. Facebook is a great form of advertising. Users on Facebook view the company information and are provided a link to send them directly to their website where they can view more specific information about the program.

We reviewed in detail what each social networking site (Facebook, MySpace, LinkedIn and Twitter) is about, what it can and can not do and the specific information it offers to users and the public. We compared the various tools and applications each site provided as well as how each could benefit REACH. We tested how easy it was to access the sites, viewed the designs and page layouts and time involved to follow along and navigate throughout the site. We also discussed the differences and similarities between all four websites and explained that LinkedIn’s emphasis is businesses and career opportunities. The profiles included company

information, developments, and postings for job positions. MySpace was found to be a social networking site primarily used for chatting as well as the posting of messages, personal profiles, and pages for entertainers and comedians. Our research of Facebook showed that it could offer not only chatting, user profiles and wall posts of messages, but also applications for photo albums, videos and fan pages. Businesses could take advantage of the success and widespread use of Facebook by providing advertisements and direct links to attract users to their company websites and product information. Twitter is also used as a form of communicating which is done through “microblogging” and “tweets”. Microblogging is the use of abbreviated words and phrases used in the messages called tweets and is limited to 140 characters. Businesses use Twitter as an additional way to provide product information to the public. Messages of all types are sent by various people as a means of spreading information, such as that related to politics, public services, charities, entertainment, and general news. Users then have the ability to comment on the tweets and give feedback which allows the company to improve its product and services.

We decided along with our sponsor that a Facebook fan page, coupled with a Twitter page, was the best option. After researching the number of members on all the websites, Facebook has the greatest number of users compared to the other websites which makes it the most logical choice. We then found that a Facebook fan page connects different users and invites everyone to comment and follow the fan page. Twitter is also available to everyone to post comments and enables everyone to follow REACH giving it more exposure to the public. We created a new Facebook account under one of our names, and posted REACH program pictures, missions and goals information as well as created a fan page for the program. The title of the fan page is REACH program which consists of pictures and missions and goals information. The Facebook

fan page was then connected to Twitter. At the conclusion of our project, the responsibilities of both social networking accounts were turned over to our sponsor.

5. CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a final summary of our accomplishments and findings for the REACH Program project, and provides suggestions for future work on the program's web-based communication methods. We believe that these suggestions will enhance the work that we've done, and assist the REACH Program in better disseminating information to enrolled and interested families alike.

5.1 Summary of Project Work

Our preliminary analysis of the REACH Program website determined several limitations of the program's web-based communication methods. The program was using a previously designed website that they were unable to access and edit due to limited technical knowledge and the website's complex HTML coding, thus resulting in outdated information and nonfunctional site elements (i.e. links, forums, etc.).

Our goal was to develop new web-based communication methods for the REACH Program that satisfied the needs of the organization, and aided in disseminating information to the program's varied audiences. To accomplish this, we designed a new website (Appendix D) based on the Acquia Drupal CMS platform, and created a Facebook fan page (Appendix E) and Twitter account (Appendix F) to increase the program's web visibility. We fully tested and implemented the social networking pages, but were unable to install and test the newly designed website due to the incompatibility of the program's previously used hosting service with the Acquia Drupal stack.

5.2 Recommendation 1: Improving the Prototype

While we were able to create a new website for the REACH Program, we recognize that we had various limitations. We intended to install our newly designed website on the REACH Program's host server, test it, and launch the site before the close of the project term, but an expired hosting subscription prevented this aspect of our implementation. We suggest that the program consider cancelling their current hosting subscription, as we were unable to determine if it was compatible with the Acquia Drupal platform, and subscribe to a hosting service that has been proven fully compatible (reference Appendix G for suggested hosting services). Additionally, we were unable to address the information management (registered site users, family information, etc.) that the REACH Program desired the new website to have. The Acquia Drupal platform was selected, in part, for its database and report capabilities, but unfortunately data management was beyond the scope of our project. We suggest the program consider hiring professional consultants, or sponsoring another IQP/MQP project group, in order to fully utilize these site capabilities.

5.3 Recommendation 2: Effectively Utilizing Social Networking Solutions (Facebook and Twitter)

What can be done to improve the Facebook and Twitter pages for a non-profit organization business, such as the REACH program is to have both greater access to the public and faster connections to forums of communication. The pages on these two websites serve as a form of good advertisement. In addition, these pages allow Facebook and/or Twitter account users to share information with other Facebook and/or Twitter users. REACH program members and fans of these pages have the ability to update their statuses, photos, news, and events in order to communicate with other users by responding to their comments, expressing their opinions, and

sharing miscellaneous information with other users. The more activity that the Facebook and Twitter pages generate, the greater the level of interest in the REACH program.

The REACH program should be maintained by constantly updating new statuses, news, events, and photos so that the organization continues to operate effectively. One of the staff members could have the responsibility to update statuses. The program will need to continue using both Facebook and Twitter with constant updates so that these two websites continue to be effective communication tools. Unlike most websites, which charge fees for advertising, Facebook and Twitter accounts are free, which is helpful to a non-profit organization like REACH with limited resources. The program members want to express how much they care for and want to help children. In addition, they want to encourage the parents to the social networking pages in order to draw the program's attention to new parents.

For example, up to 140 character limit in Twitter, the program should update its status in a specific way such as alerting users with possible weather cancellations, and/or explaining what the next class will be about. The program should be tracking and updating changes to their statuses as well because it will lead to more parents keeping track of and responding to the program's status updates. Instead of parents calling the office making the REACH program phones ring off the hook with questions, the twitter updates can be utilized to send information to their cell phones and/or computers. For these reasons, having updated and informative Facebook and twitter pages is essential for the continued success of the REACH program.

5.4 Project Conclusion

The goal of this project was to design and implement web-based communication methods that would improve the dissemination of information to various audiences of the REACH Program. This goal needed to be accomplished in a low-cost method, as the REACH Program is a non-profit organization with limited financial, human, and technical resources. Our work suggested that a newly designed website comparable in quality to similar programs in the Greater Boston area, coupled with social networking initiatives, would provide an effective, low-cost solution to the communication problems the program was experiencing. By implementing the newly designed website and continuing to develop the social networking initiatives that were implemented, the REACH Program has the potential to reach a broader, more diverse audience, to better communicate its services and benefits to that audience, and to increase program enrollment.

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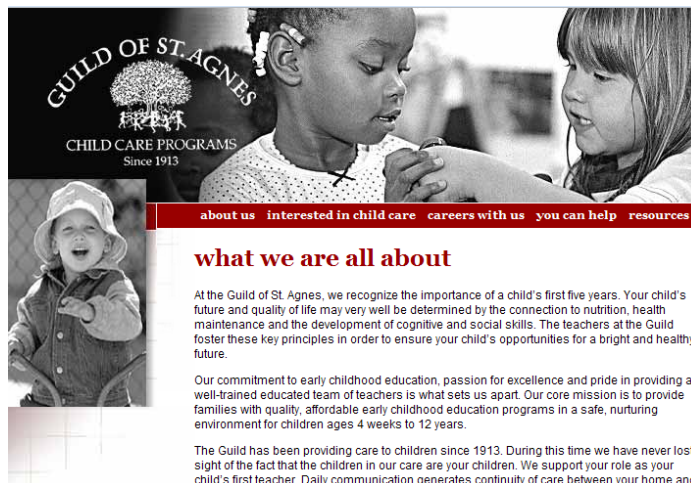
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APPENDIX A. WEBSITE COMPARISONS

To benchmark the REACH Program’s website and analyze its content, we analyzed the websites of six other non-profit organizations in the Greater Boston area. The six organizations were selected to represent various early childhood services in the same regional area as the REACH Program. All screenshots were current as of March 2010.

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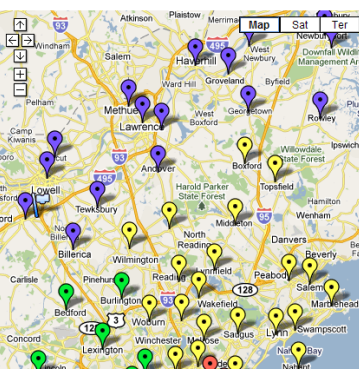
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- **Metrowest**
Arlington, Bedford, Belmont, Burlington, Lexington, Lincoln, Natick, Needham, Newton, Sudbury, Waltham, Watertown, Wayland, Wellesley, Weston
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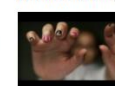
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Boys & Girls Clubs of America

United Way of Massachusetts Bay and Merrimack Valley

About Us

Boys & Girls Clubs of Boston is a 501(c)3 whose mission is to help young people, especially those who need us most, build strong character and realize their full potential as responsible citizens and leaders.

We do this by providing:

- a safe haven filled with hope and opportunity
- ongoing relationships with caring adults
- life-enhancing programs


We serve more than 14,000 children and teens, ages 6 to 18, in our Clubs, and through our programs and partnerships.

Our approach focuses on six core initiatives: Arts; Education; Leadership; Life Skills; Sports, Fitness and Recreation; and Technology. During the summer, many of our Clubs run summer camp programs for children and leadership programs for teens.



Our growing service network includes Clubs, Camp Harbor View, and a presence in police stations across the city:

Our 10 Clubs in Boston and Chelsea reflect the communities in which they are located: Charlestown (Charlestown Club), Chelsea (Jordan Club), Dorchester (Blue Hill Club and the Franklin Hill Club at the Franklin Hill Housing Development), Roslindale (the Club at the Charles Sumner Elementary School) Roxbury (Yawkey Club and the Club at the Dearborn Middle School), South Boston (South Boston Club and the Club at the Condon Elementary School) and Mattapan (the Club at the Mattahunt Elementary School).

Our Youth Service Providers Network (YSPN) places licensed clinical social workers at police stations to provide prevention and intervention services and referrals to the city's high-risk youth and their families. Since 1996, our YSPN social workers have been developing relationships with youth who are at risk for arrest, as well as those who are already part of the Juvenile Justice system, to help young people develop more trusting relationships and offer them choices.



APPENDIX B. WEBSITE DEVELOPMENT PHASE I: WEBSITE MOCK-UP

 					
<p>Registration</p> <p>Developmental Intake Form</p> <p>Evaluation Form</p> <p>Policies for Appointments</p> <p>Services</p> <p>Playgroup Information</p> <p>New Beginnings</p> <p>Breastfeeding & Developmental Support</p> <p>Moxix' and Gooxix'</p> <p>Resources for Families</p> <p>Handouts</p> <p>Program Brochure</p> <p>Instructional Video</p> <p>Helpful Links</p> <p>Provide Feedback</p>	<p>About Us</p> <p>Mission</p> <p>History</p> <p>Goal</p> <p>Quotes from Families</p> <p>Saint Elizabeth Medical Center</p>	<p>Who We Are</p> <p>Dr. Charles Anderson</p> <p>Nicole Croak</p> <p>Jacqui Stockton</p> <p>Lori Parent</p> <p>Lisa Samios</p> <p>Pattie Aiello</p>	<p>FAQs</p> <p>What is the R.E.A.C.H. Program and what does it offer?</p> <p>How do I get involved with the R.E.A.C.H. Program?</p> <p>What is a developmental screening?</p> <p>What is a discipline specific consult?</p> <p>What do the developmental playgroups consist of?</p> <p>Who is on the R.E.A.C.H. Program Team?</p>	<p>Directions</p> <p>Driving</p> <p>Railing</p> <p>Public Transportation</p> <p>Parking (add in pricing info)</p>	<p>Contact Us</p> <p>Phone Number: (617)-562-7604</p> <p>Fax: (617)789-2735</p> <p>Address: 736 Cambridge St. Brighton, MA 02135</p> <p>Contact Email: info@reachfoundation.net</p>
<p>Follow Us on</p> <p>Facebook</p> <p>Twitter</p> <p>Donation</p>	<p>Text: Welcome Message</p> <p style="text-align: center;"> A developmental program for families of children birth to three years *No Eligibility Required* The R.E.A.C.H. Team is staffed by trained and licensed clinicians </p> <hr/> <p>Resources: Providing developmental screenings with appropriate resources and referrals. Education: Offering developmental information to help parents maximize their child's full potential. Advocacy: Working with families to be aware of and access available resources for their family. Connections: Creating partnerships between families, physicians, & agencies to increase collaboration [Keywords]. Hope: Reminding families that children who are supported in their development during the critical time of birth to three years of age are more likely to reach their full potential.</p>				
<p>WPI/REACH IQP Project Te</p>	<p>What's New:</p> <p>Announcements could be listed here (cancellations, news updates, etc.) DATES TO REMEMBER...</p> <p>The R.E.A.C.H. Program will be closed on the following holidays – there will be NO GROUPS on these days!</p> <p>November 23rd – 26th, 2009 – Thanksgiving Holiday Week December 21st – 26th, 2009 – Christmas Holiday Week Thursday, December 31st, 2009 – New Year's Eve Monday, January 18th, 2010 – Martin Luther King Day Monday, February 15th, 2010 – President's Day Monday, April 19th, 2010 – Patriot's Day Monday, May 24th, 2010 – Memorial Day Monday, July 5th, 2010 – Fourth of July Celebrated</p> <p>In addition, the Thursday New Beginnings Group will also be cancelled on the following dates:</p> <p>Thursday, October 22nd, 2009 Thursday, November 12th, 2009 Thursday, November 26th, 2009 - Week of Thanksgiving Thursday, December 17th, 2009 Thursday, December 24th, 2009 - Week of Christmas Thursday, December 31st, 2009 – New Year's Eve</p> <p>Any additional cancellations due to inclement weather or other unexpected events will be noted on our voicemail which can be checked at (617) 562-7604.</p> <p>Thank You, The R.E.A.C.H. Team</p>				

Helpful Links

- Saint Elizabeth medical center- <http://www.caritasst Elizabeths.org/>
- The American Academy of Pediatrics – www.aap.org
- Children’s Television Workshop (PBS) and the home of Sesame Street – www.ctw.org (not sure, might take this out)
- Daily family features, tools, experts and shopping www.family.com (not sure, might take this out)
- The Child & Family WebGide – www.cfw.tufts.edu/
- Child Welfare League of America – www.cwla.org
- Children’s Defense Fund – www.childrensdefense.org
- Connect for Kids – www.connectforkids.org
- I Am Your Child – www.iamyourchild.org
- Mass2020 Foundation – www.Mass2020.org
- Massachusetts Child Care – www.machildcare.com
- Massachusetts Office of Child Care Services – www.qualitychildcare.org
- National Association for the Education of Young Children – www.naeyc.org
- National Black Child Development Institute – www.nbcdi.org
- National Network for Child Care – www.nncc.org
- National School-Age Care Alliance – www.nsaca.org
- Parents Helping Parents – the Roundtable of Support – www.parentshelpingparents.org
- Caroline and Sigmund Schott Foundation – www.schottfoundation.org (not sure, might take this out)
- Zero to Three – www.zerotothree.org
- United Way of Central Massachusetts – www.unitedwaycm.org/
- United Way of North Central MA – www.uwncm.org
- United Way of Tri-County – www.unitedwaytri-county.org/

Dr. Charles Anderson

**Dr. Charles Anderson, MD, MPH,
MBA**
Neonatologist, Director



"As a parent of a baby born 8 weeks prematurely, I fully appreciate the concerns and challenges faced by our families."

- Princeton University, Bachelors degree in Biochemistry
- Johns Hopkins School of Medicine, Doctoral Degree in Medicine
- Johns Hopkins School of Public Health, Masters in Public Health
- Boston University Graduate School of Business, Masters in Business Administration
- Founded Digital Healthcare Solutions to work with early stage companies leveraging internet technology to solve healthcare challenges

Nicole Croak

Nicole Croak, OTR/L, CEIS, CIMI
Occupational Therapist, Co-Director



"It is so important to ensure that children and their parents don't fall through the cracks of the system."

- BS in occupational therapy with a focus in pediatrics from the University of New Hampshire
- Certified Early Intervention Specialist (CEIS)
- Certified Infant Massage Instructor (CIMI)
- 10 years experience working with children birth to age three
- Experience working in a Level 3 Neonatal Intensive Care Unit
- Areas of interest include: pediatric feeding development, sensory integration

Jacqui Stockton

Jacqui Stockton, MS, PT, CIMI
Physical Therapist



"The R.E.A.C.H. Program allows me to educate parents on the development of their child and give them tools to help them succeed."

- MS in Physical Therapy from Springfield College
- 8 years experience providing physical therapy to children from birth to age three
- Experience with adaptive equipment fittings and training
- Experience working in Early Intervention
- Certified Infant Massage Instructor (CIMI)

Lori Parent

Lisa Samois

Lori Parent, MEd, CEIS, CIMI
Developmental Educator



"The R.E.A.C.H. Program offers families an early start in addressing developmental questions and concerns for their child and is able to maintain that connection over time."

- MEd in Child Development (Birth to Three) from Wheelock College
- BS in Psychology from Merrimack College
- 10 years experience working in Early Intervention
- 13 years experience working with children birth to age three
- Certified Early Intervention Specialist (CEIS)
- Certified Infant Massage Instructor (CIMI)

Lisa Samois, MS, CCC-SLP, CEIS
Speech/Language Pathologist



"The R.E.A.C.H. Program offers families an opportunity to be empowered by support, information, and resources to better provide for their child."

- MS in Speech-Language Pathology from Boston University
- 13 years experience providing speech therapy to children from birth to age three
- Certified Early Intervention Specialist (CEIS)
- Clinical supervisor for Boston University graduate speech-language pathology student interns
- Clinical supervisor for new speech-language pathologists completing their Clinical Fellowship Year

Pattie Aiello

Pattie Aiello, RN, IBCLC
Lactation Specialist



"As babies learn to breastfeed, it can be quite challenging. The R.E.A.C.H. Program gives us that opportunity to continue to support and educate the family around nutritional management issues."

- Registered Nurse graduate of St. Elizabeth Hospital School of Nursing
- Presently in a program at Regis College, RN to MSN
- Board Certified Lactation Consultant
- 27 years working with mothers, infants, and families
- Developed Lactation Support Services at CSEMC
- Specializing in lactation issues for: Newborns and Mothers, Prematurity and Multiples, Milk Supply and Pumping
- Consultations in hospital and post discharge

MISSION:

The first three years of a child's life are a critical time for development. The REACH Program at Caritas St. Elizabeth's Medical Center provides developmental support for families with children birth to three years of age through resources, education, advocacy, connections, and hope. Our vision is that through careful coordination of these services, no child will "slip through the cracks" and every family will be provided with the necessary information and resources to support their child's development.

- **RESOURCES:** Providing developmental screenings to identify appropriate resources for each family and making the resources accessible.
- **EDUCATION:** Providing families with developmental information through developmental screenings, discipline specific consults, and developmental playgroups to help parents maximize their child's full potential.
- **ADVOCACY:** Working with families to be aware of and to access available resources for themselves and their child.
- **CONNECTIONS:** Creating partnerships between families, physicians, and organizations to allow for a better understanding of the individual child's needs.
- **HOPE:** Reminding families that children who are supported in their development during the critical time of birth to three years of age are more likely to reach their full potential.

We encourage parents to view the REACH Program as a resource for support, information, new ideas, sharing, and reassurance.

HISTORY:

In 2003, beginning from a generous donation made to Caritas St. Elizabeth's Medical Center, a program began that became known as the NICU Follow-Up Clinic. The NICU Follow-Up Clinic staff, consisting of a Neonatologist, Occupational Therapist, and Nutritionist, provided developmental follow-up support to only the most medically fragile premature children referred to the clinic from Caritas St. Elizabeth's Medical Center Neonatal Intensive Care Unit (NICU).

In October 2005, the NICU Follow-Up Clinic formally became known as the REACH Program. With a new team, consisting of a Neonatologist, Occupational Therapist, Social Worker, and Physical Therapist, the REACH Program began to grow. All children who had been in the Caritas St. Elizabeth's Medical Center NICU or Caritas Good Samaritan Medical Center or Caritas Holy Family Hospital Special Care Nurseries were invited to participate in the REACH Program for developmental screenings, follow-up visits, and support as needed.

In September 2006, the REACH Program began receiving funding from Caritas St. Elizabeth's Medical Center and was able to expand the team and the level of services offered to families and children. The REACH Program team was able to expand to include a Speech-Language Pathologist, Lactation Specialist, and Developmental Specialist. Today, as well as accepting referrals from all Caritas Health Care facilities, the REACH Program now receives referrals from area pediatricians, hospitals, and community agencies. Through the REACH Program, families with children birth to three years of age have the opportunity to access a variety of supportive services, such as developmental screenings, discipline specific consults, developmental playgroups, and referrals to appropriate community resources.

GOALS:

We, the REACH team, are a staff of highly trained and licensed clinicians specializing in different areas of child development including motor, language, play, behavior/social skills, and self-care. Our team is excited to equip parents with the essential tools needed to assist their child in reaching his/her optimal developmental potential. We support families through:

- Developmental screenings
- Discipline specific consults
- Developmental playgroups
- Appropriate community resources and referrals

The REACH Team has a variety of skills and areas of expertise. Some of the specialties include being a Certified Infant Massage Instructor, a Certified Early Intervention Specialist, and a Board Certified Lactation Consultant. They have experience working with children in the Neonatal Intensive Care Unit and with children who have pediatric feeding issues and sensory integration issues. The REACH Team has experience facilitating overall development for children birth to three years of age and helping to connect families with community resources. The REACH Team consists of a physical therapist, occupational therapist, social worker, developmental specialist, speech-language pathologist, neonatologist, and lactation specialist.

What is the R.E.A.C.H. Program and what does it offer?

The R.E.A.C.H. Program at Caritas St. Elizabeth's Medical Center provides developmental support for children and families through resources, education, advocacy, connections and hope. We provide this support to families with children birth to three years of age through developmental screenings, discipline specific consults, developmental parent/child playgroups, and appropriate community referrals and resources. The R.E.A.C.H. Program offers families the ability to monitor and support their child's development in order for each child to reach their full developmental potential.

How do I get involved with the R.E.A.C.H. Program?

Parents may contact the R.E.A.C.H. office directly at (617) 562-7604 to schedule a Developmental Screening or to find out more about playgroups.

What is a developmental screening?

Developmental screenings are held at the R.E.A.C.H. Program playroom in the St. Margaret's Building at Caritas St. Elizabeth's Medical Center. *Developmental screenings are approximately 45 minutes long and are conducted by two clinicians of the R.E.A.C.H. Team.* Clinical observation, parent report, and a screening tool will be used to screen each child to identify the child's areas of strength and also to identify if there are any areas of weakness. *Parents are offered suggestions and handouts, as well as a one page typed report following the screening.*

What is a discipline specific consult?

Families who have already received a developmental screening by the R.E.A.C.H. Program may follow-up with a discipline specific consult with individual clinicians as needed. A discipline specific consult is available for families to receive more information regarding a specific area of concern from the appropriately trained clinician, such as a speech-language pathologist for language concerns. Developmental consults are held at the R.E.A.C.H. Program playroom in the St. Margaret's Building at Caritas St. Elizabeth's Medical Center. *A family may contact the R.E.A.C.H. office at (617) 562-7604 to schedule an appointment to meet with a clinician of a specific discipline regarding the area of concern(s) for their child.*

What do the developmental playgroups consist of?

Developmental playgroups are offered one time a week and are facilitated by one of our R.E.A.C.H. Team members. *Playgroups are 1 or 1 ½ hours long and focus on the child's overall development, each clinician brings their area of expertise to the playgroup.* Enrollment to playgroups is on-going and families may remain in a playgroup as long as appropriate for their child.

Who is on the R.E.A.C.H. Program Team?

We, the R.E.A.C.H. Team, are a staff of highly experienced and licensed clinicians specializing in child development of children birth to three years of age. The R.E.A.C.H. Team consists of a Physical Therapist, Developmental Specialist, Speech and Language Pathologist, Occupational Therapist, Lactation Specialist, and Neonatologist. We are excited to equip caregivers with the essential tools needed to assist their child in reaching his/her full developmental potential.

DRIVING DIRECTIONS

From the West:

Take the Massachusetts Turnpike (Route 90) East to Exit 17 (Newton-Watertown). Go straight and take the second right onto Park Street, following signs for Brighton. Take the first left onto Tremont Street and follow for approximately one mile until it connects to the right with Washington Street. Continue on Washington Street for approximately one mile to the medical center.

From the North:

Take I-93 South to the Massachusetts Turnpike (Route 90) West. Follow the Mass Pike to Exit 20 (Brighton-Cambridge). Proceed through the tollbooth and bear left towards Allston/Brighton (Cambridge Street). Follow "H" signs for approximately 1.5 miles to the medical center.

From the South:

Take I-93 North to the Massachusetts Turnpike (Route 90) West. Follow the Mass Pike to Exit 20 (Brighton-Cambridge). Proceed through the tollbooth and bear left towards Allston/Brighton (Cambridge Street). Follow "H" signs for approximately 1.5 miles to the medical center.

From Downtown Boston:

Take the Massachusetts Turnpike (Route 90) West. Follow the Mass Pike to Exit 20 (Brighton-Cambridge). Proceed through the tollbooth and bear left towards Allston/Brighton (Cambridge Street). Follow "H" signs for approximately 1.5 miles to the medical center.

Parking:

St. Elizabeth's has several convenient parking options. All patients can take advantage of FREE valet parking at the hospital's Seton main entrance, St. Margaret's Center for Women and Infants and our Emergency Department. The valet is staffed Monday-Friday, throughout the day with a concentration on peak patient appointment hours. In addition, visitors are encouraged to park in GARAGE B, which offers low-cost parking adjacent to the St. Margaret's building.

CONTACT US

Phone Number:

(617) 562-7604

Fax:

(617) 789-2735

Address:

736 Cambridge Street QN2P, Brighton, MA 02135

Contact Email:

info@reachfoundation.net

Policies for
Individual Appointments

SICK POLICY

Due to the fact that the R.E.A.C.H. Program services young children and families, if you or your child has had any communicable disease or experienced a fever, diarrhea, vomiting, or any cold-like symptoms within the last 24 hours, we would appreciate it if you would call to reschedule your appointment. We ask this to help keep all families as healthy as possible.

CANCELLATION POLICY

If you are unable to keep your appointment, we would appreciate at least 24 hours notice. Upon cancellation, we will try to accommodate you with the next available appointment.

Cancellations due to inclement weather or other unexpected events will be noted via email and/or on our voicemail, which can be checked at (617) 562-7604.

*** If at any time you are no longer interested in receiving mailings or emails from the R.E.A.C.H. Program, please contact our office or you may also send a reply email. Thank you! ***

Playgroup Information: clicking on this tab will create a drop-down menu directly below it; the items on the drop-down menu will link to pages describing each other the playgroups

Developmental program for families with children Birth to Three years

No Eligibility Required

Infant Massage Classes

Birth to four months

New Beginnings Parent/Child Group

Breastfeeding Support Group

Available for families with children birth to six months

Developmental Screenings and Consults

Birth to Three years

Baby Group

(Birth to pre-crawlers)

Conference Room 5

Mondays from 10am to 11am

Breastfeeding Support Group

(Birth to six months)

Conference Room 6

Tuesdays from 2pm to 3:30pm

Facilitated by a Board Certified Lactation Consultant

New Beginnings Playgroup

(Crawlers to new-walkers)

Conference Room 4

Thursdays from 2pm to 3:30pm

Movin' and Groovin' Playground

(New-walkers 9-18 months)

Conference Room 4

Saturdays from 10am to 11pm

Playgroups are held in Conference Room 5 of the St. Margaret's Building

At St. Elizabeth's Medical Center in Brighton

For more information contact the REACH office at (617) 562-7604

Resources for Families: clicking this tab will also result in a drop-down menu directly below it. Each item will link to a page containing the various resources (i.e. handouts, video, etc.)

Quotes from R.E.A.C.H. Families

"The R.E.A.C.H. Program has been beneficial to me in so many ways. When my toddler was an infant, I could count on the parenting groups to vent frustrations or seek the advice and caring knowledge of others. As my child gets older, the playgroup we attend continues to be a wonderful place to reconnect with parents and share our experiences."

"It is a great program; it is great that children can have individual screenings so information can be delivered to each parent with helpful hints regarding their own children. [Thank you](#) for having this program and for your kindness and dedication."

"Staff members were caring, encouraging, and energetic – not to mention extremely knowledgeable in their field! [Thank you!!](#)"

"Developmental therapists are parents, lovely informative approach, they make you feel very comfortable and location of this service is excellent. [Thank you so much!](#)"

"I feel not as isolated now as I did, I have a support and information network now to rely on – I feel hopeful and happy with the screenings."

"The girls made me feel so much better about motherhood with support and conversation."

Program Brochure

We're All So Impressed!

A sampling of parents who have experienced the

R.E.A.C.H. Program firsthand express their satisfaction

with its benefits:

• "The R.E.A.C.H. program has been beneficial to me in so many ways. When my toddler was an infant, I could count on the parenting groups to vent frustrations or seek the advice and caring knowledge of others. As my child gets older, the playgroup we attend continues to be a wonderful place to reconnect with parents and share our experiences."

• "It is a great program; it is great that children can have individual screenings so information can be delivered to each parent with helpful hints regarding their own children. Thank you for having this program and for your kindness and dedication."

• "Staff members were caring, encouraging, and energetic – not to mention extremely knowledgeable in their field! Thank you!!"

• "Developmental therapists are parents, lovely informative approach, they make you feel very comfortable and location of this service is excellent. Thank you so much!"

• "I feel not as isolated now as I did, I have a support and information network now to rely on – I feel hopeful and happy with the screenings."

• "The girls made me feel so much better about Motherhood with support and conversation."

Have You Ever Asked Yourself...?

• Is my child keeping up with his/her peers?

• Is my child able to communicate his/her needs?

(eye contact, different cries, gestures, etc.)

• Is my child eating enough? (picky eater, eating a variety of foods, different textures, etc.)

• According to "the books", is my child reaching his/her age appropriate milestones?

• What are some fun activities that I can do with my child?

If you have answered 'yes' to any of the above questions, and would like to know more about your child's development, please contact the

R.E.A.C.H. Program for an individualized screening.

Bring your questions and learn from experienced clinicians.

The R.E.A.C.H. Vision Statement

The first three years of a child's life are a critical time for development. The R.E.A.C.H. Program at St. Elizabeth's Medical Center provides developmental support for families with children from birth to three years of age through Resources, Education, Advocacy, Connections, and Hope. Our vision is that every family will be provided with the necessary information and resources to support their child's development.

• **RESOURCES:** Providing developmental screenings to identify appropriate resources for each family and help to make the resources more accessible.

• **EDUCATION:** Providing families with developmental information through screenings,

discipline specific consults, and playgroups to help parents maximize their child's full potential.

• **ADVOCACY:** Working with parents to ensure that resources are available and accessible for their family.

• **CONNECTIONS:** Creating partnerships between families, physicians, and organizations to allow for a better understanding of the individual child's needs.

• **HOPE:** Reminding families that children who are supported in their development, during the critical time of birth to three years of age, are more likely to reach their full potential.

What Should My Newborn Be Doing?

Find out what you need to know by scheduling a developmental screening for your child with our licensed clinicians. Families will be given suggestions and handouts to encourage their child's development. These screenings and consults are conducted on an individual basis. Please contact our office at (617) 562-7604 to schedule an appointment or to speak with someone regarding questions or concerns for your child's development.

Why Is Tummy Time So Very Important?

This and other key questions are answered during playgroups which provide hands-on learning for parents and children. Other key topics covered include: specific areas of development, play, age-appropriate toys, and ways to facilitate language, movement, and socialization. Parents also have an opportunity to ask questions regarding their child's development and to access resources and handouts.


APPENDIX C. WEBSITE DEVELOPMENT PHASE II: PROPOSED WEBSITE FORMAT

Website Home Page

The screenshot shows a web browser displaying the R.E.A.C.H. Program website. The browser's address bar shows the site's URL and navigation links: About Us, Who We Are, FAQs, Directions, and Contact Us. The website header is red and features the R.E.A.C.H. Program logo and name. Below the header, there is a search bar and a user profile for 'ashleigh' with options for My account, Create content, Administer, and Log out. A sidebar menu includes Registration, Services, Playgroups, and Family Resources. The main content area is titled 'Welcome to the R.E.A.C.H. Program' and includes a message for Acquia Network subscribers, a timestamp 'Mon, 12/07/2009 - 19:30 -- ashleigh', and a large heading: 'We would like to welcome you to the R.E.A.C.H. Program website!'. Below this heading, there is a paragraph describing the program and its goals, followed by four key areas: Resources, Education, Advocacy, and Connections. The page concludes with a placeholder text: '[Other welcome messaging needed...]'.

Content management Site building Site configuration User management Reports Help
About Us Who We Are FAQs Directions Contact Us

Subscription not active 0 / 1 Log out ashleigh

 **R.E.A.C.H. Program**

Home

Search this site:

ashleigh

- My account
- Create content
- Administer
- Log out

Registration
Services
Playgroups ▶
Family Resources ▶

Welcome to the R.E.A.C.H. Program

If you have an Acquia Network subscription, please enter your subscription key and identifier on the settings page.

Mon, 12/07/2009 - 19:30 -- ashleigh

We would like to welcome you to the R.E.A.C.H. Program website!

The R.E.A.C.H. Program is a developmental program for families of children birth to three years. Unlike many early intervention programs, **no eligibility is required**. The R.E.A.C.H. Team is staffed by trained and licensed clinicians.

Resources: Providing developmental screenings with appropriate resources and referrals.
Education: Offering developmental information to help parents maximize their child's full potential.
Advocacy: Working with families to be aware of and access available resources for their family.
Connections: Creating partnerships between families, physicians, & agencies to increase collaboration.
Hope: Reminding families that children who are supported in their development during the critical time of birth to three years of age are more likely to reach their full potential.

[Other welcome messaging needed...]

Website Home Page: Drop Down Menus

The screenshot shows a website interface with a top navigation bar containing links for 'Content management', 'Site building', 'Site configuration', 'User management', 'Reports', and 'Help'. Below this is a secondary navigation bar with 'About Us', 'Who We Are', 'FAQs', 'Directions', and 'Contact Us'. The 'About Us' menu is open, displaying a list of items: 'History', 'Mission', 'Goals', 'Family Feedback', and 'St. Elizabeth's Medical Center'. The main content area features a red header with the 'R.E.A.C.H. Program' logo and a 'Home' breadcrumb. A welcome message reads 'Welcome to the R.E.A.C.H. Program' with a 'View' button. A yellow-highlighted note states: 'If you have an Acquia Network subscription, please enter your sub'. A timestamp 'Mon, 12/07/2009 - 19:30 — ashleigh' is visible. A large heading 'We would like to welcome' is followed by a paragraph describing the program as a developmental program for families of children with disabilities, noting that participation is 'required'. The R.E.A.C.H. Team is staffed by trained and licensed clinicians. A list of services is provided: **Resources:** Providing developmental screenings with appropriate referrals; **Education:** Offering developmental information to help parents make informed decisions; **Advocacy:** Working with families to be aware of and access available resources; **Connections:** Creating partnerships between families, physicians, and other professionals; **Hope:** Reminding families that children who are supported in their development can reach their full potential. A sidebar on the left includes a search box, a user profile for 'ashleigh' with options for 'My account', 'Create content', 'Administer', and 'Log out', and a menu with 'Registration', 'Services', 'Playgroups', and 'Family Resources'.

Website Home Page: Displaying Side Menus

This screenshot shows the same website home page as above, but with the 'Family Resources' menu item expanded. The expanded menu lists several options: 'Handouts', 'Program Brochure', 'Instructional Videos', 'Helpful Links', and 'Provide Feedback'. The 'Provide Feedback' option is highlighted. The rest of the page content, including the navigation bars, search box, user profile, and main text, remains the same as in the previous screenshot.

APPENDIX D. WEBSITE DEVELOPMENT PHASE III: FINAL PROPOSED WEBSITE

Home Page

User login

Username: *
ashleigh

Password: *
.....

Request new password

- Registration ▶
- Services
- Playgroups ▶
- Family Resources ▶
- Ways to Give Back

Welcome to the REACH Program

Mon, 12/07/2009 - 19:30 — ashleigh

Have you ever asked yourself:

- Is my child keeping up with his/her peers?*
- Is my child able to communicate his/her needs?*
- Is my child eating enough?*
- According to "the books", is my child reaching his/her age appropriate milestones?*
- What are some fun activities that I can do with my child?*

If you have answered 'yes' to any of the above questions and would like to know more about your child's development, please contact the REACH Program for an individualized screening. Bring your questions and learn from experienced clinicians.

The REACH Program is a developmental program for families of children birth to three years. Unlike many early intervention programs, **no eligibility is required**. The REACH Team is staffed by trained and licensed clinicians.


Resources: Providing developmental screenings with appropriate resources and referrals.

Education: Offering developmental information to help parents maximize their child's full potential.

Advocacy: Working with families to be aware of and access available resources for their family.

Connections: Creating partnerships between families, physicians, and agencies to increase collaboration.

Hope: Reminding families that children who are supported in their development during the critical time of birth to three years of age are more likely to reach their full potential.



- ▷ Create content
- ▷ Administer
- Log out

- Registration ▶
- Services
- Playgroups ▶
- Family Resources ▶
- Ways to Give Back

Jacqui Stockton, MS, PT, CIMI
Physical Therapist




"The R.E.A.C.H. Program allows me to educate parents on the development of their child and give them tools to help them succeed."

MS in Physical Therapy from Springfield College
8 years experience providing physical therapy to children from birth to age three
Experience with adaptive equipment fittings and training
Experience working in Early Intervention
Certified Infant Massage Instructor (CIMI)

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Home

Family Resources: Handouts [View](#) [Edit](#)

If you have an Acquia Network subscription, please enter your subscription key and identifier on the settings page.

We frequently provide handouts to parents who ask us for developmental information. These handouts cover a wide range of topics -- a sampling of our most frequently-requested resources is provided here for your convenience.

"Ages and Stages": These handouts are each tailored to a specific age range, providing information on the ways to develop your child's communication, motor, problem solving, and personal-social skills.

Children and Language: This handout gives an overview of activities that may help your child to learn about language, from birth through age three.

Age-Appropriate Toy List: This handout provides a list, broken down by age group (birth through age three), to help your child develop various skills.


Attachment	Size
Ages and Stages: 1-4 months	1 MB
Ages and Stages: 4-8 months	1.21 MB
Ages and Stages: 8-12 months	1.02 MB
Children and Language	503.52 KB
Age-Appropriate Toy List	279.5 KB

Registration ▶
Services
Playgroups ▶
Family Resources ▶
Ways to Give Back


ashleigh

- My account
- ▷ Create content
- ▷ Administer
- Log out

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Home

Playgroup Information

If you have an Acquia Network subscription, please enter your subscription key and identifier on the settings page.


The REACH Program currently offers four different developmental playgroups:

- Baby Group**
- New Beginnings**
- Breastfeeding Support Group**
- Movin' and Groovin'**

All of our playgroups are free of charge, with **no eligibility requirements**. Each provides hands-on learning for parents and children. Key topics covered include specific areas of development, play, age-appropriate toys, and ways to facilitate language, movement, and socialization. Parents also have an opportunity to ask questions regarding their child's development and to access resources and handouts.

Location
Playgroups are held in Conference Room 5 of the St. Margaret's Building at St. Elizabeth's Medical Center in Brighton. Information on each playgroup can be found in the 'Playgroups' tab on the left of your screen.

For more information, or to register your child, please contact the REACH office at **(617) 562-7604**. Cancellations due to inclement weather and other time changes are currently posted on our office voicemail.



Search this site:

ashleigh


- My account
- Create content
- Administer
- Log out

- Registration ▶
- Services
- Playgroups ▶
- Family Resources ▶
- Ways to Give Back

APPENDIX E. FACEBOOK FAN PAGE

facebook

Home Profile Find Friends Account ▾



REACH PROGRAM

[Wall](#)
[Info](#)
[Photos](#)
[Discussions](#)
[+](#)

What's on your mind?

Attach:

Everyone ▾ [Share](#)

[REACH PROGRAM + Fans](#)
[REACH PROGRAM](#)
[Just Fans](#)
⚙ Settings

Write something about REACH PROGRAM.

Insights

See All

34.3

Post Quality

1

Interactions This Week

REACH PROGRAM

Okay . . think we finally got this REACH program FB all set!!! Yay!!!

March 5 at 12:44pm · Comment · Like

Beng Tulu likes this.

Write a comment..

REACH PROGRAM

Hi Reach Families!!! A little confusion with setting up new website and pages . . if you have multiple "Jacqui" friends . . my most recent is the one with my picture!! should be good to go now!!! sorry for confusion!!! :)

March 4 at 3:43pm · Comment · Like

REACH PROGRAM

*** No thursday playgroup 3/4/10 . . :(. . . see you all next week! *** please pass on to anyone who may not receive this message!!

Create an Ad

Boston Almost Free

1 ridiculously huge coupon emailed free to you each day. Boston's best restaurants, spas, events & more. Get today's!

Like

Spring Skiing Escape

Enjoy sunshine, soft snow & parties. Spring skiing, 50% off lodging at Sugarbush!

Chat (2)

APPENDIX F. TWITTER PAGE

The screenshot shows the Twitter profile page for the account **rprojectteam**. At the top, the Twitter logo is on the left, and navigation links for Home, Profile, Find People, Settings, Help, and Sign out are on the right. The main content area is titled "What's happening?" with a "140" character count. Below this is a text input field and a "Tweet" button. A "New!" notification prompts the user to add a location. The profile header shows the account name, 11 tweets, and 0 following, followers, and listed users. A "Twitter-Blog" link is also present. The main feed displays four tweets from the account, each with a timestamp and a link. The right sidebar contains navigation options like Home, Direct Messages, Favorites, Retweets, Lists, and Trending: Worldwide. The browser's address bar at the bottom shows "Internet | Protected Mode: On".

twitter

Home Profile Find People Settings Help Sign out

What's happening? 140

rprojectteam
11 tweets
0 following 0 followers 0 listed

Twitter-Blog
n. a nifty place to read official news from Twitter.

Home

@rprojectteam
Direct Messages 0
Favorites
Retweets

Search

Lists
Lists are timelines you build yourself, consisting of friends, family, co-workers, sports teams, you name it.
New list

Trending: Worldwide

Internet | Protected Mode: On

What's happening?


rprojectteam Okay . . . think we finally got this REACH program FB all set!!! Yay!!! <http://fb.me/6y9w9R9>
9:44 AM Mar 5th via Facebook

rprojectteam Hi Reach Families!!! A little confusion with setting up new website and pages . . . if you have multiple "Jacqui" ... <http://fb.me/5W38SP2>
12:43 PM Mar 4th via Facebook

rprojectteam *** No thursday playgroup 3/4/10 . . . :(. . . see you all next week!! *** please pass on to anyone who may... <http://fb.me/Kue7VnmWT>
9:02 AM Mar 3rd via Facebook

rprojectteam There will be no playgroup on Thursday, March 4th -- see you next week! <http://fb.me/KueprJv31>

APPENDIX G. FINAL PROJECT PRESENTATION: MARCH 2, 2010


 **WPI**

Web-Based Communication for the REACH Program: Design and Implementation

Ryan Brown and Ashleigh Wood

Interactive Qualifying Project
Final Presentation
March 2, 2010


Worcester Polytechnic Institute

 **WPI** WPI Interactive Qualifying Project

- Worcester Polytechnic Institute (WPI)
- WPI Undergraduate Project Program
 - Humanities and Arts Project
 - Interactive Qualifying Project (IQP)
 - Major Qualifying Project (MQP)
- Interactive Qualifying Project


"The IQP challenges students to address a problem that lies at the intersection of science or technology with social issues and human needs...[t]he objective of this interdisciplinary requirement is to enable WPI graduates to understand, as citizens and as professionals, how their careers will affect the larger society of which they are part."

Worcester Polytechnic Institute


 **WPI** Presentation Agenda

- REACH Program review
- Problem statement and project overview
- Methodology
- Analysis and identified needs
- Solutions demonstration
 - Website
 - Social networking
- Project benefits
- Conclusions and recommendations
- Acknowledgements and discussion


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 **WPI** The REACH Program

- Non-profit program
- Based at Caritas St. Elizabeth's Medical Center in Boston, MA
- Aims to target families of children from birth through age three
- Staff members work closely with the families, providing various services
 - Developmental screenings
 - Developmental playgroups
 - Referrals




Worcester Polytechnic Institute

 **WPI** Previous REACH Program Website



Worcester Polytechnic Institute

 **WPI** Problem Statement

Limitations of the current REACH Program website:

- Outdated program information
- Lack of staff access
- Lack of web site interactivity

Implications:

Limitations prevent effective dissemination of information to families and other interested parties.

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WPI Project Overview

Project Goal: To provide the REACH Program with a set of solutions that will improve web-enabled communications.

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WPI Objectives

1. Identify the information that the REACH Program desires to disseminate to potential enrolled families and currently enrolled families, as well as their current communication strategies.
2. Analyze the design and content of the current REACH Program website using research methods described in the literature.
3. Identify various options for web site design and maintenance for the REACH Program's new website; identify several options of social networking for the program.
4. Design and implement a new website and social networking page for the REACH Program.

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WPI Methodology

- Planning**
 - Identify needs
 - Develop workplan
 - Staff project
- Analysis**
 - Develop framework of analysis
 - Determine project requirements, feasibility
 - Interviews with REACH staff members
- Design**
 - Website design: CMS, content, layout, outside resources
 - Prototype development
 - Social networking: sites, content
- Implementation**
 - Prototype finalization, implementation
 - Usability studies, testing
 - Presentation and final report
 - Recommendations and future work

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WPI Identified Needs

- Staff access to website
- Links to developmental information, other community resources
- Links to program handbook, handouts/fliers, registration and feedback forms
- News alerts (cancellations, etc.) on home page
- Database of patient information
 - Registration, appointment setting, appointment reminders, post-appointment surveys, etc.
 - Ability to run reports off of website database
 - Option for families to share their information with other families who want to make connections outside of the programs

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WPI Similar Non-Profit Programs

Organization	Website Address	Services Provided
REACH Program	www.reachfoundation.net	Developmental screenings, developmental playgroups, specialist consultations
Guild of St. Agnes	www.guildofstagnes.org	Early childhood education, focused on development
Y.O.U. Inc.	www.youinc.org	Family support networking and child welfare services
United Way of Massachusetts Bay and Merrimack Valley	http://supportunitedway.org/	Provides assistance with finding resources for specific family support needs
UMass Memorial Children's Medical Center	http://www.umassmemorial.org/medicalcenter/PCfm?id=2053	Medical center focuses on all aspects of child health care
Boys and Girls Club of Boston	http://www.bgcb.org/	Early childhood education, early childhood developmental services (including child care)
YMCA of Boston	http://www.ymcaboston.org/	Health awareness, day and overnight camps, childcare, recreation, family activities

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WPI Website Evaluations

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Analysis: REACH Program Website



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Solution: Acquia Drupal CMS Platform



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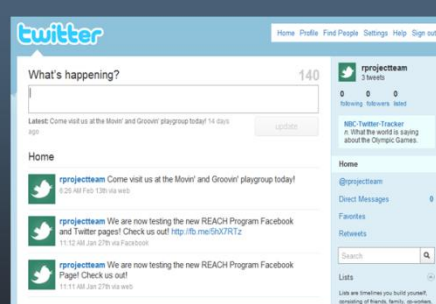
Solution: Facebook Fan Page



Worcester Polytechnic Institute



Solution: Twitter



Worcester Polytechnic Institute



Project Benefits to the REACH Program

- Newly designed website and social networking initiatives
- More effective communication with enrolled families
- Greater exposure to a larger audience
 - Engagement of new families
- Simple solutions
 - Easily managed
 - Easy to navigate
 - Low cost

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Project Benefits to IQP Team

- Long term, real life project
 - Weekly progress meetings
 - Presentations
 - Proposal and project report
 - Final product
- Experience in web design, other technical skills
- Gained skills in collaborative work
 - Research
 - Writing
 - Presentation
 - Product design
 - Working with a client (project sponsor)

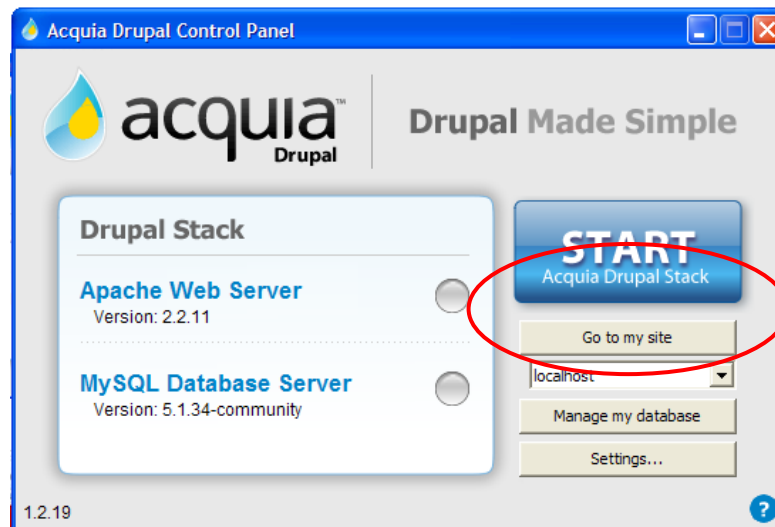
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- Hosting service
 - Supports Acquia Drupal CMS Platform
- Installation of website
- Continued use of Facebook and Twitter
- Future Work:
 - Installation and testing of new website
 - Data management

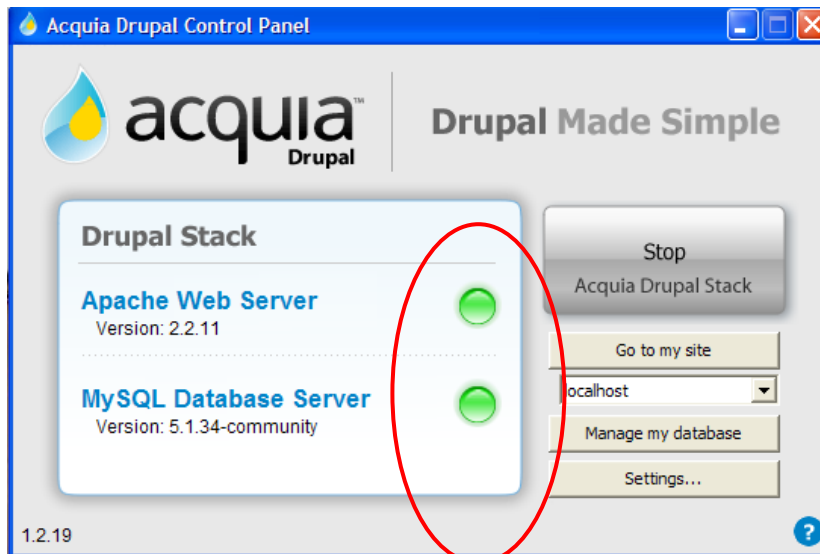
APPENDIX H. USER MANUAL FOR BASIC WEBSITE USE (ADMINISTRATIVE FUNCTIONS)

Launch Drupal Stack

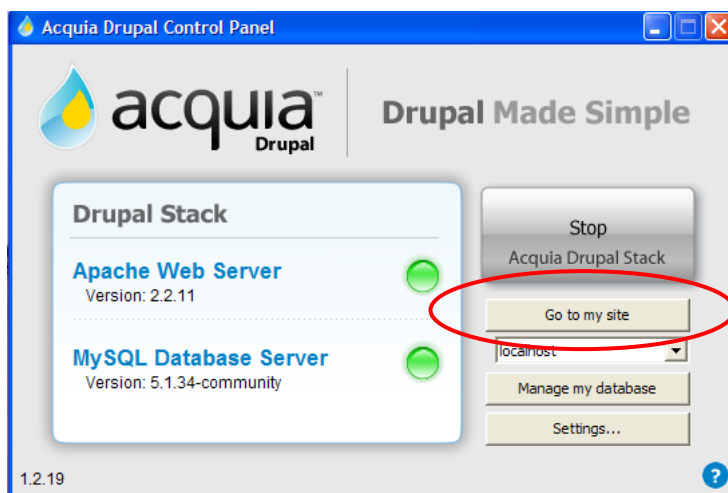
1. Open Acquia Drupal stack on the host server.
2. A control panel will be displayed; select “Start Acquia Drupal Stack.”



3. The control panel will display “green lights” to indicate that the stack is ready.

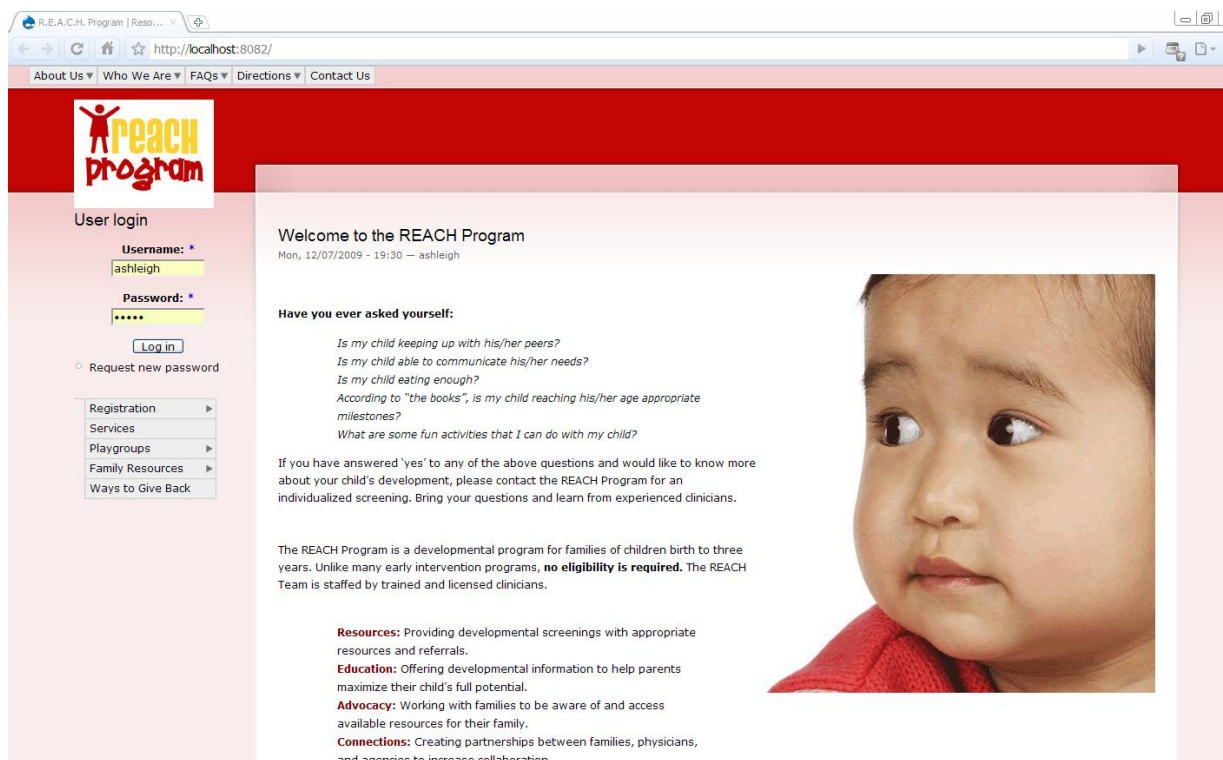


4. Select “Go to my site.” Your site will load in your default web browser.

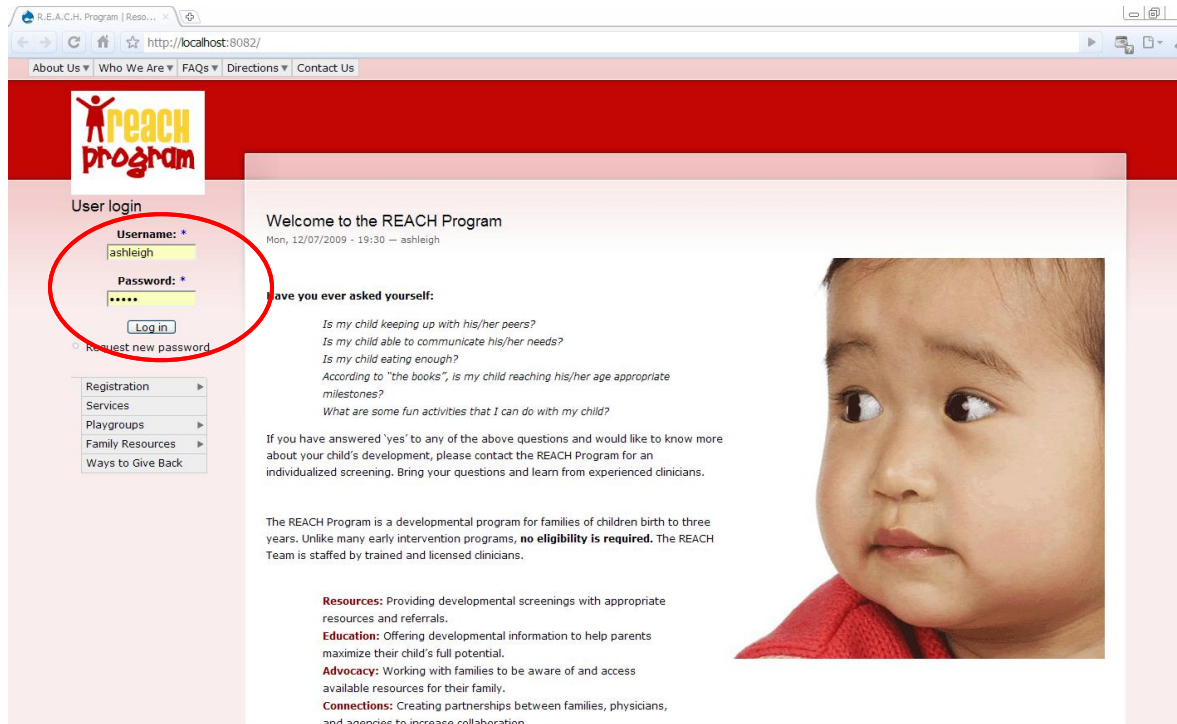


Administrator Log In

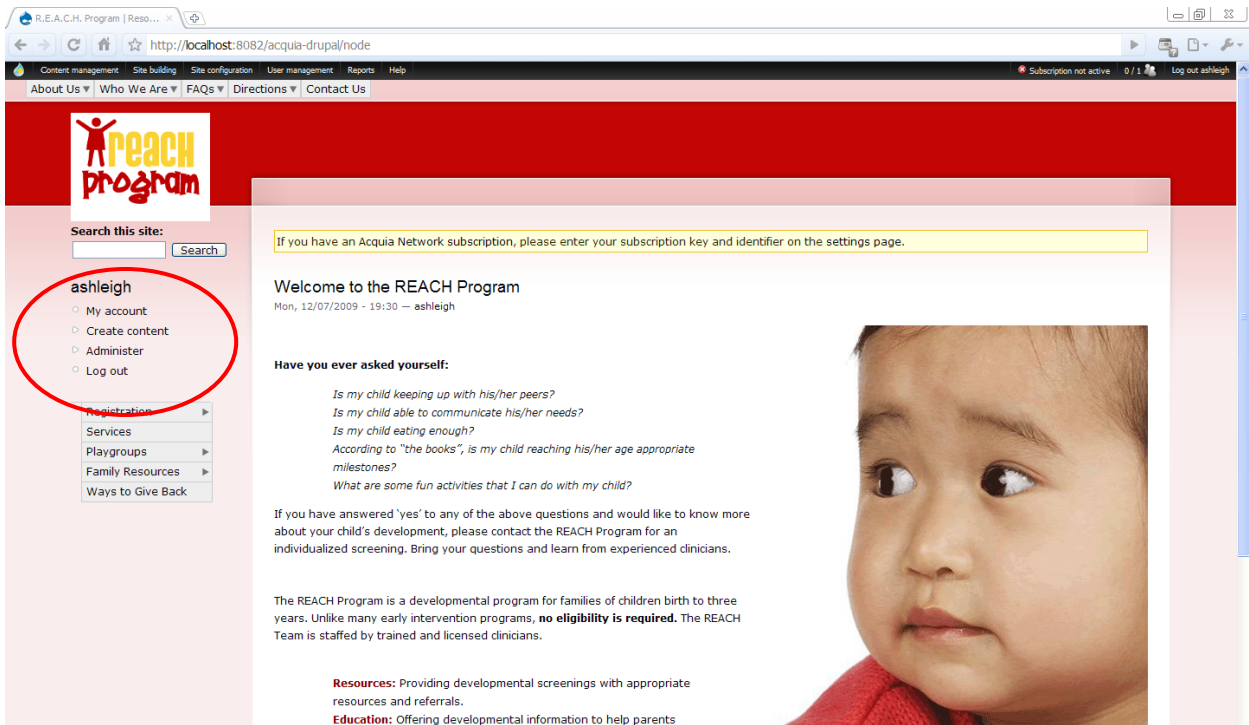
1. Your webpage will load in your default web browser after launching the stack and selecting “Go to my site.”



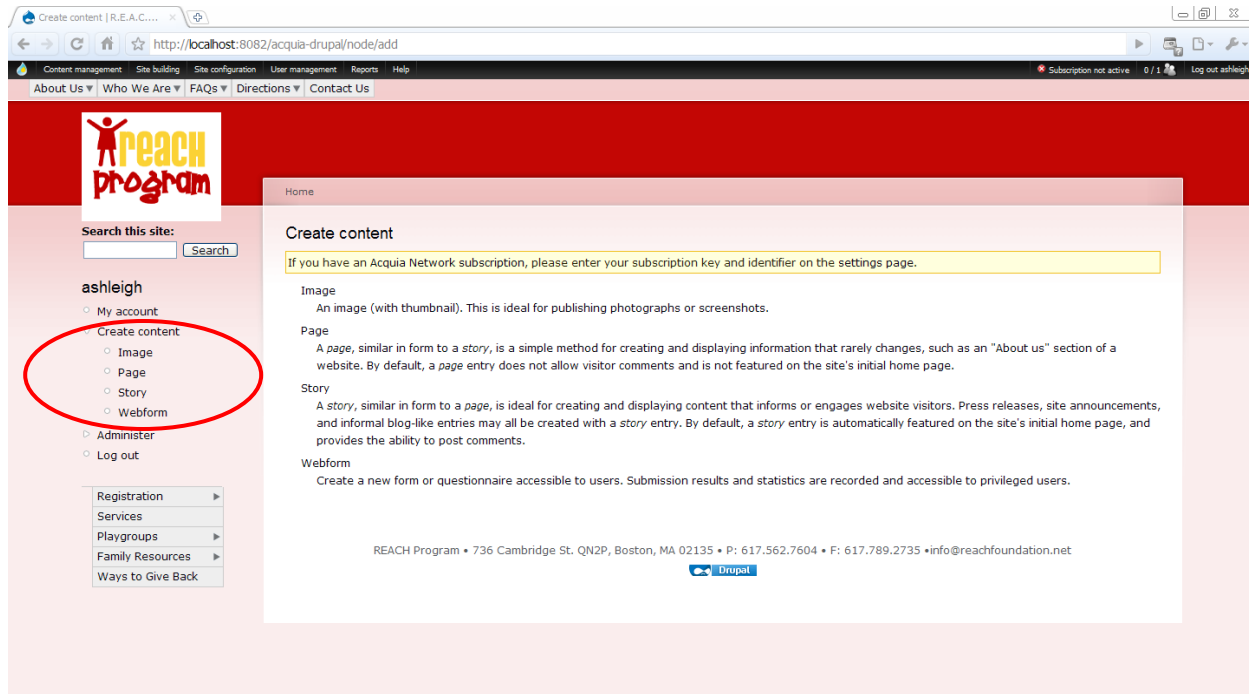
2. Enter your administrator User ID and Password.



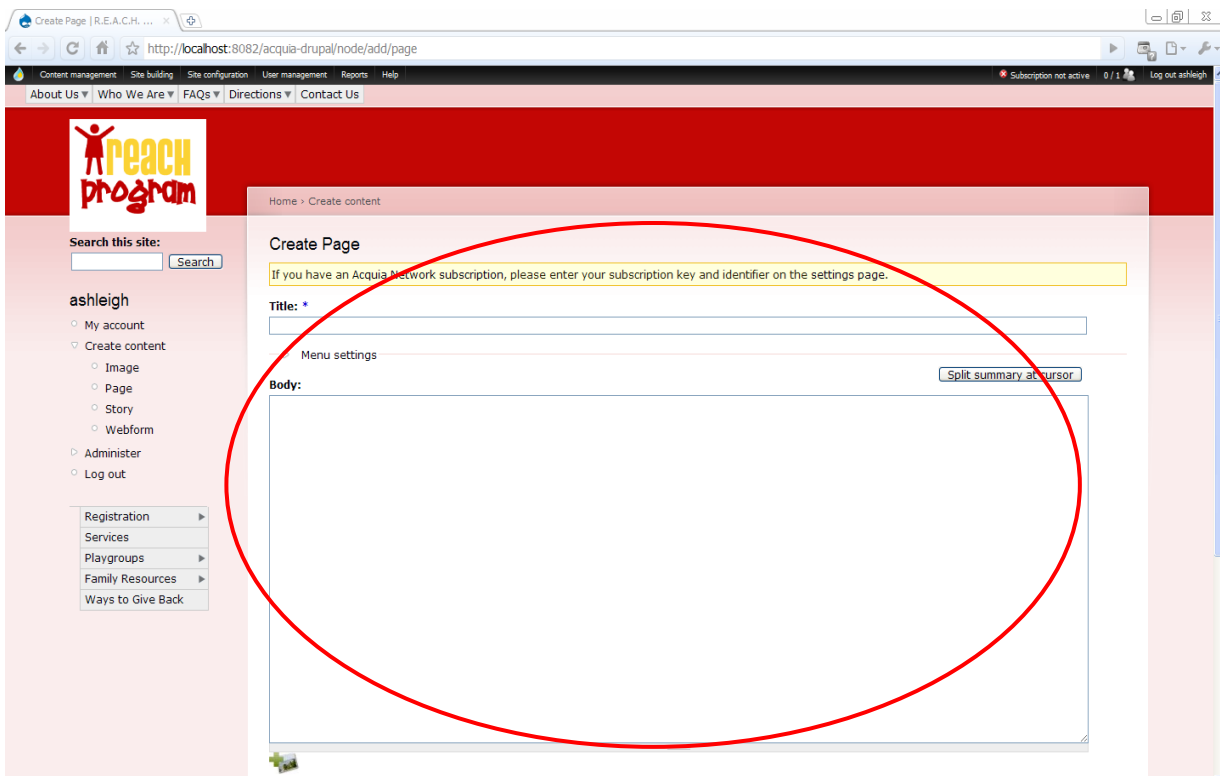
3. If you log in successfully, the administrator menu will appear where the log-in fields were prior to log-in.



1. After logging into your administrator account, click the “Create Content” tab. A drop-down menu will pull down from it, providing content options to choose from.

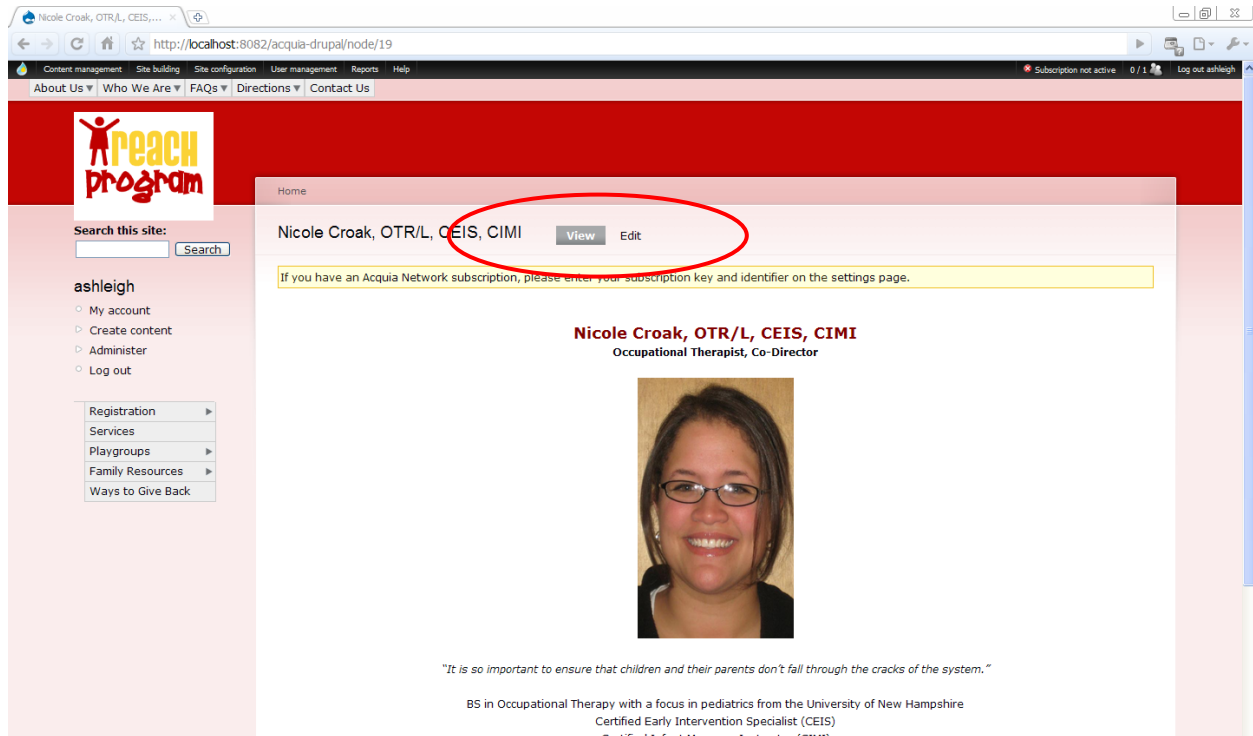


2. All content is edited in a simple text form.

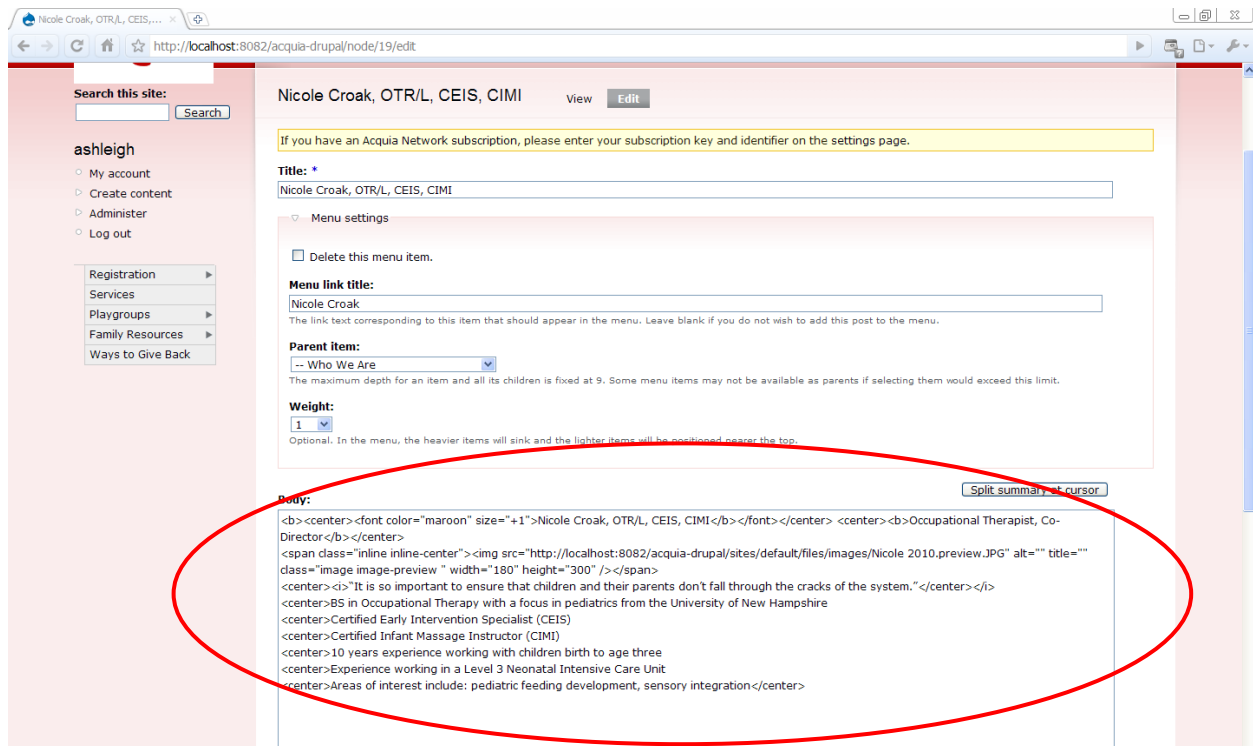


3. Example (staff information page):

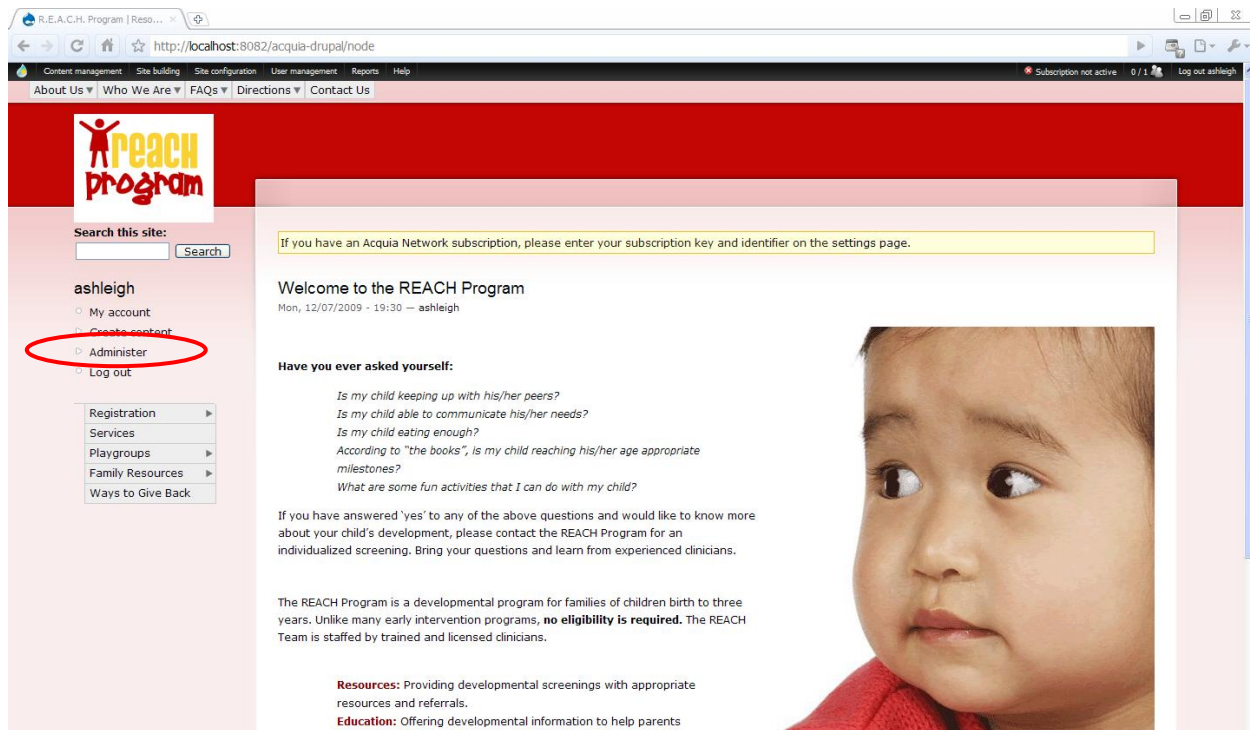
Navigate to any web page on your site; at the top will be an “Edit” button.



Selection of the “Edit” button will bring up a page detailing the basic HTML coding and text of that particular page.



1. Select “Administer” from the administrator menu.



2. A page sorting all site content by type, and all administrative functions by their general topic, will display. You can select and administer all web site content from this master administrative menu.

